ITEM NO 3
MEETING DATE February 23, 2015
STAFF Holland

HEARING OFFICER

STAFF REPORT

PROJECT: Hill Pond Residences Project Development Plan, PDP #140015

APPLICANT: Catamount Properties
Charles Bailey
7302 Rozena Drive
Longmont, Colorado 80503

OWNER: Robert and Karen Yovanoff
910 Hill Pond Road
Fort Collins, CO 80526

PROJECT DESCRIPTION:

This is a proposed residential development containing 18 dwelling units consisting of 8 single-family attached dwellings (commonly referred to as duplexes) and 2 single-family detached dwellings. The project is located at 910 Hill Pond Road, north of the intersection of Hill Pond Road and Gilgalad Way, and is in the M-M-N, Medium Density Mixed-Use Neighborhood zone district. The existing single family home on the 2.18 acre site is proposed to be demolished along with the existing community pool and tennis courts. All of the proposed dwellings are two-stories and have 2-car attached garages. The dwellings are centered around an interior drive isle containing a central gathering area.

One Modification of Standard is proposed to Land use Code Section 3.5.2(D)(1), *Relationship of Dwellings to Streets and Parking*, requesting to eliminate the connecting sidewalk requirement and provide an alternative pedestrian and bicycle connection network with an "enhanced shared drive".

The proposed single-family and single-family attached uses are permitted in the M-M-N zone district, subject to a Type One administrative review.

RECOMMENDATION:

Approval of the Hill Pond Residences Project Development Plan and Modification of Standard to 3.5.2(D)(1), *Relationship of Dwellings to Streets and Parking – Orientation to a Connecting Walkway.*

EXECUTIVE SUMMARY:

The Hill Pond Residences Project Development Plan (PDP) complies with the applicable requirements of the City of Fort Collins Land Use Code (LUC), more specifically:

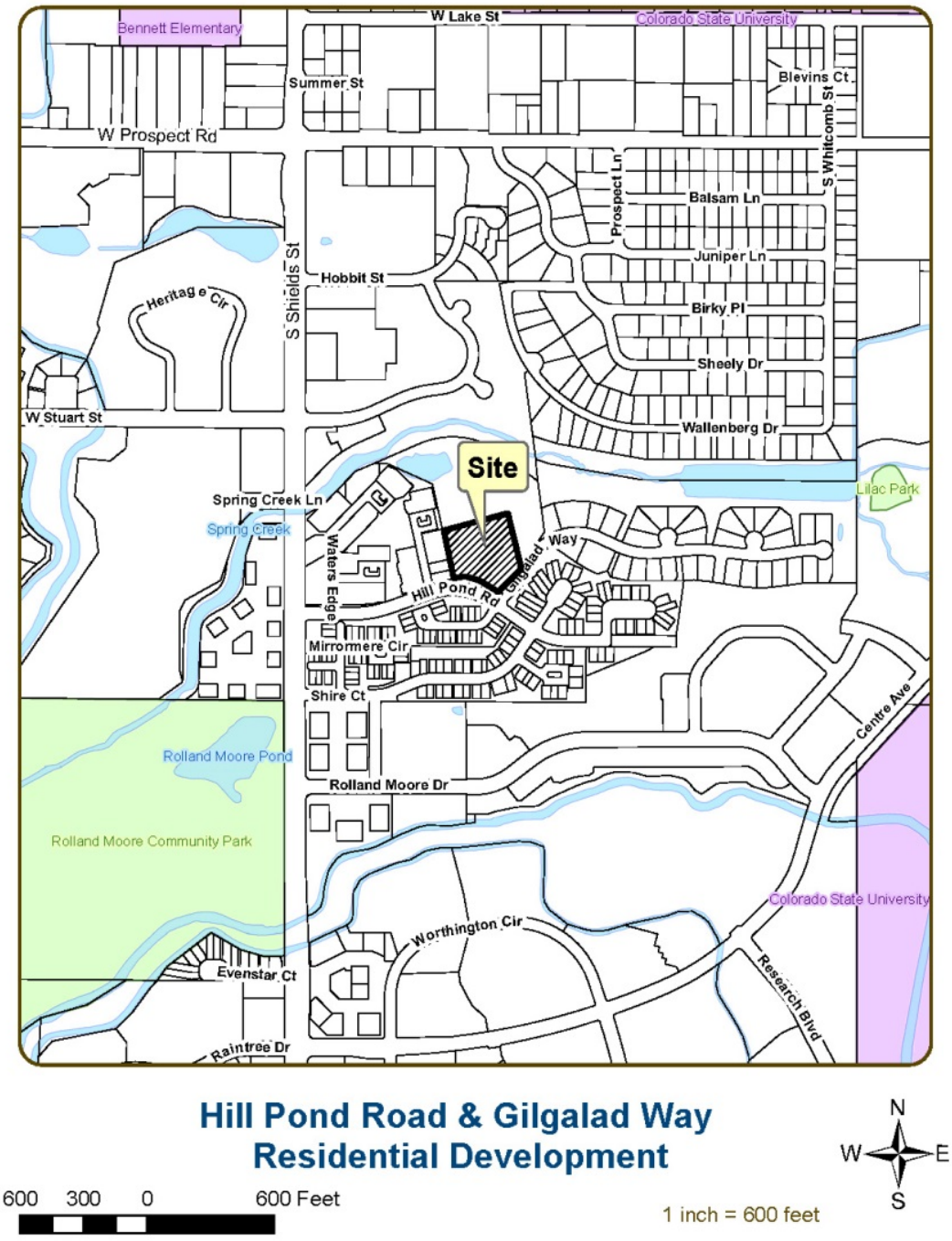
- The PDP complies with process located in Division 2.2 – Common Development Review Procedures for Development Applications of Article 2 – Administration.

- The PDP complies with relevant standards located in Division 4.6, Medium Density Mixed-Use Neighborhood (M-M-N) zone district.

- The Modification of Standard to Section 3.5.2(D)(1) meets the applicable requirements of Section 2.8.2(H), and the granting of this Modification would not be detrimental to the public good.

- The PDP complies with the relevant standards located in Article 3 – General Development Standards, provided that the Modification of Standard is approved.

VICINITY MAP:



COMMENTS:

1. Background:

The surrounding zoning and land uses are as follows:

Direction	Zone District	Existing Land Uses
North	Medium Density Mixed-Use Neighborhood District (M-M-N)	One single-family residence on approximately 4 acres (1900 South Shields Street)
South	Medium Density Mixed-Use Neighborhood District (M-M-N)	Sundering Townhomes PUD – single-family attached neighborhood
East	Medium Density Mixed-Use Neighborhood District (M-M-N); Low Density Residential District (R-L)	One single-family residence on approximately 4 acres (1900 South Shields Street); Windtrail on Spring Creek PUD – single-family detached residences
West	Medium Density Mixed-Use Neighborhood District (M-M-N)	Hill Pond On Spring Creek PUD – a mix of single-family attached and detached residences

Land Use History:

- The property was annexed into the City of Fort Collins with the Spring Creek Third Annexation in 1969.

- The 2 acre site originally served as a private amenity facility – including tennis courts, pool, etc. – for the Hill Pond on Spring Creek PUD, and was originally platted in 1972 as part of the Second Replat of the Hill Pond on Spring Creek First Filing. At some point thereafter the facility was sold and is currently used as a single-family residence.

2. Compliance with Medium Density Mixed-Use Neighborhood (M-M-N) Zone District Standards:

The project is in compliance with all applicable M-M-N standards with the following relevant comments provided. Language in this staff report that is taken

directly from the Land Use Code (LUC) is shown in *italics,* with certain relevant elements underlined for emphasis.

A. *Section 4.6(B)(2)(a) - Permitted Uses*

The proposed single-family attached and single-family detached uses are permitted in the M-M-N zone district subject to a Type One review.

B. Section 4.6(D)(1) – Density

The proposed density is of 8.26 dwelling units per net acre is in compliance with the density range of this section, which requires that residential developments containing 20 acres or less have an overall minimum density of 7 dwelling units per acre. The minimum density for developments that are more than 20 acres is 12 dwelling units per net acre. There is no specific maximum density in the M-M-N District.

C. Section 4.6(D)(3) – Building Height

The project proposes a maximum building height of two stories, which is in conformance with the maximum building height of three stories in M-M-N District.

3. <u>Compliance with Article 3 of the Land Use Code – General Development Standards</u>

The project is compliance with all applicable General Development Standards with the following relevant comments provided:

A. Section 3.2.1 Landscaping and Tree Protection

1) *Section 3.2.1(D)(1)(c) Full tree stocking.* Canopy shade trees, evergreen trees and ornamental trees are provided around the perimeter of the proposed buildings in accordance with the minimum standards.

2) *Section 3.2.1(D)(2) Street trees.* Canopy shade trees are provided at approximately 40-foot intervals along the project's Hill Pond Road and Gilgalad Way frontages, accordance with the standards of this section. In order to provide a more natural character, trees are planted in informal groupings along these street frontages, which is permitted provided that the minimum overall spacing requirement is met.

3) *Section 3.2.1(D)(3) Minimum Species Diversity.* The PDP provides not more than 15% of any one tree species in compliance with this standard.

4) *3.2.1(E)(1) Buffering Between Incompatible Uses and Activities: In situations where the Director determines that the arrangement of uses or design of buildings does not adequately mitigate conflicts reasonably anticipated to exist between dissimilar uses, site elements or building designs, one (1) or more of the following landscape buffering techniques shall be used to mitigate the conflicts.*

(a) Separation and screening with plant material: planting dense stands of evergreen trees, canopy shade trees, ornamental trees or shrubs;

(b) Integration with plantings: incorporating trees, vines, planters or other plantings into the architectural theme of buildings and their outdoor spaces to subdue differences in architecture and bulk and avoid harsh edges;

(c) Establishing privacy: establishing vertical landscape elements to screen views into or between windows and defined outdoor spaces where privacy is important, such as where larger buildings are proposed next to side or rear yards of smaller buildings;

(d) Visual integration of fences or walls: providing plant material in conjunction with a screen panel, arbor, garden wall, privacy fence or security fence to avoid the visual effect created by unattractive screening or security fences;

(e) Landform shaping: utilizing berming or other grade changes to alter views, subdue sound, change the sense of proximity and channel pedestrian movement.

Staff analysis:
Generally, staff finds that the landscape plan provides sufficient plant material to satisfy this standard. Additionally, the overall proposed layout of buildings – providing a backyard-to-backyard transition around the perimeter of the proposal, as well as a 26-foot buffer to the west – contributes to a compatible transition from the building perimeter to the adjacent existing uses surrounding the project.

Also contributing to this this transition (particularly to the west) is a perimeter shrub bed along the buildings' perimeter that softens and partially screens the proposed dwelling units' perimeter patios. The adjacent existing homes to the west also have some perimeter wood privacy fencing enclosing portions of the adjacent rear yards.

In order to screen headlights and soften noise from the drive aisle terminating between units 12 and 13, three evergreen trees and a perimeter shrub bed are provided west of the drive aisle.

Lastly, in the southeast corner of the site, southeast of dwelling unit 1 (units are labeled on the site plan for reference), an additional shade tree would be beneficial. Staff is recommending that a Bur Oak proposed in the center of the site be moved to this location, and this will also provide for additional access in the center of the site for snow stockpiling in the lawn area.

This standard is mainly intended to address adequately mitigating conflicts where the *arrangement of uses or design of buildings does not adequately mitigate conflicts reasonably anticipated to exist between dissimilar uses, site elements or building designs.* Typically, staff does not consider that this standard reasonably applies to transitions where single-family homes (in this case located to the west) are adjacent to proposed single-family and two-family homes.

However, staff finds this particular buffering standard is applicable given the context – although the proposed uses and building designs are not dissimilar to the existing residential uses to the west, these existing buildings were constructed on the property line and are 1.5 to 2.5 feet lower than the patios of the proposed dwellings to the east. Because of this condition, the proposed PDP provides a buffer yard that is 26 feet in depth in conjunction with ten trees (3 of which are existing) within the buffer yard, as well as perimeter shrubs along the proposed building foundations.

B. *Section 3.2.1(E)(5)(d) Parking Lot Interior Landscaping – Walkways and Driveways.*

This section requires that all interior walkways and driveways have one canopy shade tree per 40 linear feet of driveway/walkway frontage. The project proposes a private drive system which combines the connecting sidewalk and private drives into a “shared street”. Along this shared street system, canopy shade trees are provided along the interior drive frontages in excess of the minimum 40-foot spacing requirement.

This provision of new canopy shade trees within the interior driveway/walkway system is an important component of staff’s recommendation of the PDP’s proposed shared street design, because the alternative proposed design does not preclude the development from providing an adequate *urban tree canopy*. Additionally, the provision of canopy shade trees along the “fronts” of the dwellings contributes to the purpose of the City landscape standards and building standards by:

(3.2.1 Landscaping - purpose and general standard):

a) supporting functional purposes such as spatial definition, enhancement of outdoor spaces, visual screening, creation of privacy;
b) enhancing the appearance of the development and neighborhood;
c) ensuring significant canopy shading to reduce glare and heat build-up;
d) contributing to the visual quality and continuity within the development;
e) providing screening and mitigation of potential conflicts between activity areas and site elements and;
f) enhancing the pedestrian environment and scale;

(3.5.2 Residential Building Standards – purpose and general standard):

g) promoting variety, pedestrian interest and pedestrian-oriented streets in residential developments and;
h) placing a high priority on building entryways and their relationship to the street.

C. *3.2.1(F) Tree Protection and Replacement.*

This standard requires that the project preserve and protect existing significant trees within the Limits of Development to the extent reasonably feasible, and that these trees may help satisfy the landscaping requirements of the development. Streets, buildings and lot layouts shall be designed to minimize the disturbance to significant existing trees. All required landscape plans shall accurately identify the locations, species, size and condition of all significant trees, each labeled showing the applicant's intent to either remove, transplant or protect.

The tree protection standards state that: *Where it is not feasible to protect and retain significant existing tree(s) or to transplant them to another on-site location, the applicant shall replace such tree(s) according to the following schedule and requirements. Replacement trees shall be used to satisfy the tree planting standards of this Section. Replacement trees shall be planted either on the development site or in the closest available and suitable planting site.* The City Forester shall determine the most suitable planting location if planting is required off-site.

A significant tree is defined in Article 5 as any tree that has a DBH (diameter at breast height) of six inches or more.

Any affected tree that is removed shall be replaced with not less than one (1) or more than six (6) replacement trees sufficient to mitigate the loss of value

of the removed significant tree. The rated value of the trees is determined by the City Forester in conjunction with the Applicant's certified arborist.

The mitigation value of each existing tree is determined by a number of factors, including, but not limited to: shade, canopy, aesthetic, environmental and ecological value of the tree to be removed and by using the species and location criteria in the most recent published appraisal guide by the Council of Tree and Landscape Appraisers.

Replacement trees shall meet the following minimum size requirements:

(a) Canopy Shade Trees: 3.0" caliper balled and burlap or equivalent.

(b) Ornamental Trees: 2.5" caliper balled and burlap or equivalent.

(c) Evergreen Trees: 8' height balled and burlap or equivalent.

Additionally, the tree protection standards of this section provide exemptions from the replacement requirements for trees that meet one or more of the following criteria:

(a) dead, dying or naturally fallen trees, or trees found to be a threat to public health, safety or welfare;

(b) trees that are determined by the City to substantially obstruct clear visibility at driveways and intersections;

(c) Siberian elm less than eleven (11) inches DBH and Russian olive less than eight (8) inches DBH;

(d) Russian Olive and Siberian Elm of wild or volunteer origin, such as those that have sprouted from seed along fence lines, near structures or in other unsuitable locations;

(e) Russian Olive and Siberian Elm determined by the City Forester to be in poor condition.

In order to address the tree mitigation requirements outlined above, the PDP has submitted a tree mitigation plan. The plan describes the species, condition, and size of the existing trees and assigns a mitigation value (0 through 6) for the existing trees.

A total of 72 significant existing trees are located within the project's limits of development. Of this total, 9 are proposed to remain, with the remaining 63 trees proposed to be removed and mitigated. Through the process of several

on-site evaluations involving both the City Forester and the Applicant's qualified arborist, the health of the existing trees was evaluated and a mitigation value was assigned to each tree by the City Forester, as required by the LUC standard.

Through this evaluation process, it was observed that many of the perimeter trees along Hill Pond Road and Gilgalad Way are in poor health. These perimeter trees are located in places on the proposed site plan where they could be retained, however these trees (mainly cottonwoods) are in poor or potentially hazardous condition and are proposed to be removed.

The majority of the trees that are in an acceptable condition to be retained are in locations that are interior to the site, where there is a reasonable expectation that buildings and circulation patterns would occur that would conflict with the existing tree locations. Additionally, these existing trees have a caliper size (trunk diameter) that is too large to have a reasonable expectation for successful on-site transplanting. Lastly, seven of the trees that are proposed to be retained in their current locations are along the western portion of the project – this is a location that helps with the project's transition and buffering from existing homes to the west. This transition is aided by the project's increased western building setback – the minimum side setback at this location is 5 feet, and the project proposes a 26 foot setback.

The project satisfies the mitigation requirements by providing at least new 67 upsized mitigation trees which satisfies the identified overall mitigation value of 64.5 as assessed on the Tree Mitigation Plan.

Based on the existing tree evaluation process and aspects of the site plan configuration outlined above, staff's opinion is that the project satisfies the tree protection and replacement standards of this section by *preserving and protecting existing significant trees within the Limits of Development to the extent reasonably feasible*, and by providing an adequate number of new upsized mitigation trees in locations and with species selections that are suitable to provide a long-term contribution to the City *urban tree canopy.*

D. *3.2.1(H)* ***Placement and Interrelationship of Required Landscape Plan Elements.*** *In approving the required landscape plan, the decision maker shall have the authority to determine the optimum placement and interrelationship of required landscape plan elements such as trees, vegetation, turf, irrigation, screening, buffering and fencing, based on the following criteria:*

(1) protecting existing trees, natural areas and features;

(2) enhancing visual continuity within and between neighborhoods;

(3) providing tree canopy cover;

(4) creating visual interest year round;

(5) complementing the architecture of a development;

(6) providing screening of areas of low visual interest or visually intrusive site elements;

(7) establishing an urban context within mixed-use developments;

(8) providing privacy to residents and users;

(9) conserving water;

(10) avoiding reliance on excessive maintenance;

(11) promoting compatibility and buffering between and among dissimilar land uses;

(12) establishing spatial definition.

Should it be determined that additional landscaping is warranted to satisfy the criteria above, this LUC section provides the decision maker some flexibly in the arrangement of landscaping on the site. This provision can also be applied at the Final Plan phase if the situation is warranted as the plans (including utility plans) are finalized.

E. Section 3.2.2 – Access, Circulation and Parking

Minimum off-street parking quantities required for the project are based on the number of bedrooms for each two-family dwelling, and in this case all of the dwellings are 3 bedroom units, which require two off-street parking spaces per dwelling. The project proposes two-car garages for each dwelling which provide parking in conformance with this standard. Two single-family detached dwellings are also proposed and the required parking is also met for these units with an attached two-car garage for each unit.

Ten additional guest parking spaces are provided in the center of the site. Parking stall and drive aisle dimensions are provided in accordance with the standards of this section, as well as parking lot islands and landscaping in accordance with the minimum standards of this section.

Other relevant standards in Section 3.2.2 are discussed in conjunction with the Modification request later in this staff report.

F. *Section 3.3.1 – Plat Standards.*

The lot's orientation provides direct access to a public street. The layout of roads, driveways, utilities, drainage facilities, and other services are designed in accordance with the City's engineering standards. The plat demonstrates proper dedication of public rights-of-way, drainage easements and utility easements that are needed to serve the area being developed.

G. *Section 3.4.1 Natural Habitats and Features.*

Staff finds that the findings of the project's Ecological Characterization Study are acceptable, which conclude that, due to past development of the site, no significant ecological resources will be adversely impacted by the development proposal. The study outlines that the primary concern on-site is the timing of the construction and removal of trees to avoid disturbing nesting birds, and this requirement is noted on the site plan.

H. Section 3.5.1(A)(B)(C) Building and Project Compatibility

This standard requires that new projects be compatible with the established architectural character and context of the surrounding area.

The project provides four distinct housing designs that are appropriate to the context in terms of size, bulk, massing, scale, detail and articulation in the following ways:

- The primary elements of the proposed architecture – including the overall outline of the buildings, the use of roof gables, second-story porches, and second-story floor space that is integrated into the overall roof line – are designed with a moderate size, bulk, and massing that provides an appropriate transition and compatible fit with existing homes in the vicinity.

- An appropriate number of secondary elements, including building projections and recesses that are appropriately scaled, provide visual interest and articulated massing on all sides of the homes.

- A significant amount of architectural detailing provided, particularly along the "shared street", including the use of two distinctly different enhanced garage door designs, entrance "shade arbor" structures between the buildings, projecting trellis elements above the garage doors, outdoor living spaces above the garages, large articulated windows and masonry.

- The use of materials and patterns is balanced, with colors and textures helping to emphasize and articulate overall building forms.

I. *Section 3.5.1(D) Building and Project Compatibility – Privacy Considerations.*

This section requires that elements of the development plan be arranged to maximize the opportunity for privacy by the residents of the project and minimize infringement on the privacy of adjoining land uses. Staff finds that the project adequately addresses this standard by providing a 26-foot buffer yard to the west where the project abuts existing residences, and by providing landscape elements within the buffer space including deciduous shade trees, evergreen trees and perimeter foundation shrubs.

J. *Section 3.5.2(H) Land Use Transition.*

This section requires that, when land uses with significantly different visual character are proposed abutting each other and where gradual transitions are not possible or not in the best interest of the community, the development plan shall, to the maximum extent feasible, achieve compatibility through the provision of buffer yards and passive open space in order to enhance the separation between uses.

Generally staff's analysis based on previous applications of this standard is that the visual character of the adjacent land uses is not significantly different. However, the project does provide a 26-foot buffer yard to the west in conformance with this standard. This is mainly to compensate for the existing condition in which the existing homes to the west were built partially abutting property line.

K. Section 3.5.2 Residential Building Standards

1) *Section* 3.5.2(B) *Residential Building Standards – General Standard*. Staff finds that the proposed building designs meet the standards of this section by providing significantly enhanced architectural articulation and variation, with distinctive building entrances that are oriented towards the enhanced private drive in accordance with the general standard.

2) *Section 3.5.2(C) Housing Model Variety and Variation Among Repeated Buildings.* This standard requires that any development containing fewer than one hundred (100) single-family or two-family dwelling units shall have at least three (3) different types of housing models. Each housing model shall have at least three (3) characteristics which clearly and obviously distinguish it from the other housing models, which characteristics may include, without limitation, differences in floor plans,

exterior materials, roof lines, garage placement, placement of the footprint on the lot and/or building face.

Staff finds that the four housing models provided (three two-family models and one single-family model), provide distinctive architectural features that are noticeably different in accordance with this standard.

3) *Section 3.5.2(D)(1) Relationship of Dwellings to Streets and Parking – Orientation to a Connecting Walkway.*

The applicant requests a modification to this standard which is discussed later in this staff report.

4) Section 3.5.2(E) *Residential Building Setbacks.* The project is in conformance and exceeds the minimum building setback standards:

Minimum setback required:	Setback Provided:
Front: 15 feet (Hill Pond and Gilgalad)	Varies – 15 to 22 feet
Side: 5 feet (west)	26 feet
Side: 5 feet (west)	10 to 19 feet
Rear: 8 feet	15 feet

4. Modification of Standard Request to Section 3.5.2(D)(1) – Relationship of Dwellings to Streets and Parking

Modification Description:

This is a Modification Request to Section 3.5.2(D)(1), which addresses orientation to a connecting walkway.

The Applicant requests that an *enhanced shared drive* be used to satisfy the *connecting walkway and major walkway spine* requirement in LUC 3.5.2(D), so that the project dwelling's primary entrances connect to the public street using an *enhanced shared drive* in which vehicle, pedestrian and bicycle routes are shared within the enhanced drive areas of the proposed plan.

Land Use Code Standard Proposed to be Modified (areas underlined for emphasis):

LUC 3.5.2(D)(1):
(D) Relationship of Dwellings to Streets and Parking.

(1) Orientation to a Connecting Walkway. Every front facade with a primary entrance to a dwelling unit shall face the adjacent street to the extent reasonably feasible. Every front facade with a primary entrance to a dwelling unit shall face a connecting walkway with no primary entrance more than two hundred (200) feet from a street sidewalk. The following exceptions to this standard are permitted:

(a) Up to two (2) single-family detached dwellings on an individual lot that has frontage on either a public or private street.

(b) A primary entrance may be up to three hundred fifty (350) feet from a street sidewalk if the primary entrance faces and opens directly onto a connecting walkway that qualifies as a major walkway spine.

(c) If a multi-family building has more than one (1) front facade, and if one (1) of the front facades faces and opens directly onto a street sidewalk, the primary entrances located on the other front facade(s) need not face a street sidewalk or connecting walkway.

Other Relevant Standards:

Any modification to the connecting walkway standard must demonstrate compliance with 3.2.2(A),(B),(C)(1)(a) and 3.2.2(D)(1), which state:

3.2.2 Access, Circulation and Parking (areas underlined for emphasis)

(A) Purpose. This Section is intended to ensure that the parking and circulation aspects of all developments are well designed with regard to safety, efficiency and convenience for vehicles, bicycles, pedestrians and transit, both within the development and to and from surrounding areas. Sidewalk or bikeway extensions off-site may be required based on needs created by the proposed development. This Section sets forth parking requirements in terms of numbers and dimensions of parking stalls, landscaping and shared parking. It also addresses the placement of drive-in facilities and loading zones.

(B) General Standard. The parking and circulation system within each development shall accommodate the movement of vehicles, bicycles, pedestrians and transit, throughout the proposed development and to and from surrounding areas, safely and conveniently, and shall contribute to the attractiveness of the development. The on-site pedestrian system must provide adequate directness, continuity, street crossings, visible interest and security as defined by the standards in this Section. The on-site bicycle system must connect to the city's on-street bikeway network. Connections to the off-road trail system shall be made, to the extent reasonably feasible.

(C) Development Standards. All developments shall meet the following standards:

(1) Safety Considerations. To the maximum extent feasible, pedestrians shall be separated from vehicles and bicycles.

(a) Where complete separation of pedestrians and vehicles and bicycles is not possible, potential hazards shall be minimized by the use of techniques such as special paving, raised surfaces, pavement marking, signs or striping, bollards, median refuge areas, traffic calming features, landscaping, lighting or other means to clearly delineate pedestrian areas, for both day and night use.

(D) Access and Parking Lot Requirements. All vehicular use areas in any proposed development shall be designed to be safe, efficient, convenient and attractive, considering use by all modes of transportation that will use the system, (including, without limitation, cars, trucks, buses, bicycles and emergency vehicles).

(1) Pedestrian/Vehicle Separation. To the maximum extent feasible, pedestrians and vehicles shall be separated through provision of a sidewalk or walkway. Where complete separation of pedestrian and vehicles is not feasible, potential hazards shall be minimized by using landscaping, bollards, special paving, lighting and other means to clearly delineate pedestrian areas.

Relevant LUC Definitions:

A connecting walkway and *major walkway spine* are defined in Article 5 of the LUC as:

Connecting walkway shall mean (1) any street sidewalk, or (2) any walkway that directly connects a main entrance of a building to the street sidewalk without requiring pedestrians to walk across parking lots or driveways, around buildings or around parking lot outlines which are not aligned to a logical route.

Major walkway spine shall mean a tree-lined connecting walkway that is at least five (5) feet wide, with landscaping along both sides, located in an outdoor space that is at least thirty-five (35) feet in its smallest dimension, with all parts of such outdoor space directly visible from a public street.

Maximum extent feasible is defined in Article 5 of the LUC as:

Maximum extent feasible shall mean that no feasible and prudent alternative exists, and all possible efforts to comply with the regulation or minimize potential

harm or adverse impacts have been undertaken. (code already includes underline emphasis)

Land Use Code Modification Criteria:

"The decision maker may grant a modification of standards only if it finds that the granting of the modification would not be detrimental to the public good, and that:

(1) the plan as submitted will promote the general purpose of the standard for which the modification is requested equally well or better than would a plan which complies with the standard for which a modification is requested; or

(2) the granting of a modification from the strict application of any standard would, without impairing the intent and purpose of this Land Use Code, substantially alleviate an existing, defined and described problem of city-wide concern or would result in a substantial benefit to the city by reason of the fact that the proposed project would substantially address an important community need specifically and expressly defined and described in the city's Comprehensive Plan or in an adopted policy, ordinance or resolution of the City Council, and the strict application of such a standard would render the project practically infeasible; or

(3) by reason of exceptional physical conditions or other extraordinary and exceptional situations, unique to such property, including, but not limited to, physical conditions such as exceptional narrowness, shallowness or topography, or physical conditions which hinder the owner's ability to install a solar energy system, the strict application of the standard sought to be modified would result in unusual and exceptional practical difficulties, or exceptional or undue hardship upon the owner of such property, provided that such difficulties or hardship are not caused by the act or omission of the applicant; or

(4) the plan as submitted will not diverge from the standards of the Land Use Code that are authorized by this Division to be modified except in a nominal, inconsequential way when considered from the perspective of the entire development plan, and will continue to advance the purposes of the Land Use Code as contained in Section 1.2.2.

Any finding made under subparagraph (1), (2), (3) or (4) above shall be supported by specific findings showing how the plan, as submitted, meets the requirements and criteria of said subparagraph (1), (2), (3) or (4).

Summary of Applicant's Justification:

The Applicant requests that the modification be approved and provides the following justification for Criteria 1 and Criteria 4:

Criteria (1): *The plan as submitted will promote the general purpose of the standard for which the modification is requested equally well or better than would a plan which complies with the standard for which a modification is requested.*

Applicant's Justification Narrative for Criteria 1:

- The *enhanced shared drive* proposed in the design, while appearing non-compliant, can be shown to satisfy the intent of the "connecting walkway" required by the LUC Standard.
- The *enhanced shared drive* provides circulation for auto, bicycle and pedestrian traffic without many of the standard means of separation between the modes. However, there are many features at play in the proposed design to ensure the safety of all users:
  - Speed bump and "slow" signage (see attached photos) at the entrance to the development send a visual and physical message to drivers that they are entering a pedestrian zone and must be cautious.
  - Color differentiation of pavement to delineate auto/bicycle lane from pedestrian walkway. Similarly, changes in paving imply an edge between common drive/walkway and dwelling entries, garage entries and parking.
  - The drive layout consists of short straight-a-ways ending in T intersections. As a result cars could reasonably be expected to remain at lower speeds, not having the distance required to easily, or inadvertently, attain higher speeds.
  - The small scale of the interior plaza and driveway constrains traffic sufficiently to raise awareness and reduce speed, but still provides adequate visibility to reasonably avoid surprises
  - Though the *enhanced shared drive* is "street-like", it is a private drive and thereby only serves a limited number of users (18 dwelling units). Conflicts associated with increasing traffic will be practically nonexistent for the life of the project regardless of how the surrounding neighborhood evolves.
  - The landscaping in the planting beds at the dwelling facades fulfills a traffic calming function as well as provides a 7 foot deep buffer between private garages/entrances and public circulation.
- These elements of the proposed design, when combined, provide strong cues for car operators to recognize the shared nature of the space, to appreciate the potential for conflict afforded by irresponsible driving, and to adjust to appropriate speeds and behavior.
- These, and many similar, features have been successfully utilized in urban areas to safely accommodate multi-modal transportation as well as other

social activities (most notably, perhaps, in examples of the Dutch woonerf). See attached photos.

- By providing detached walks at the project entry and a distinct, color differentiated, walking zone in the multimodal area, the *enhanced shared drive*, we believe, provides pedestrian users with a safe, direct path to the public street sidewalk equally well or better than a traditional connecting walkway as described in the LUC Standard

Criteria(4): *The plan as submitted will not diverge from the standards of the Land Use Code that are authorized by this Division to be modified except in a nominal, inconsequential way when considered from the perspective of the entire development plan, and will continue to advance the purposes of the Land Use Code as contained in Section 1.2.2.*

Applicant's Justification Narrative for Criteria 4:

- The interior, private *shared enhanced drive* is designed to comfortably, and safely accommodate auto traffic within the same area as pedestrian circulation. A separated car alley around the perimeter of the lot, behind the dwelling units, is a common feature in similar developments. However, this "back" alley would typically not be adorned with traffic calming devices, would consist of longer straight-a-ways encouraging higher speeds, but would still realistically be used by bikes and pedestrians and would in many ways pose a greater risk to these users than a shared, interior drive with the above mentioned safety features.

- The predominant orientation of the surrounding dwellings is with garages to the front and back yards facing each other. By eliminating the outside perimeter car alley we present the landscaped rear facades of our dwelling units to the back yards of the neighboring homes (1.2.2(M) ensuring that development proposals are sensitive to the character of existing neighborhoods).

- The garage doors share the front façade of the dwelling units with the main entry but because they are given different design treatments they serve to help differentiate, rather than homogenize, the facades. The variations in plane, material and massing of the facades combined with other design features serves to promote the spirit of other relevant portions of the LUC:
  - 1.2.2(J) improving the design, quality and character of new development.
  - 3.5.3(E)(2)(3) *Facades.* Facades that face streets or connecting pedestrian frontage shall be subdivided and proportioned using features such as windows, entrances, arcades, arbors, awnings, treillage with vines, along no less than fifty (50) percent of the façade.

- 3.5.3(E)(2)(4) *Entrances.* Primary building entrances shall be clearly defined and recessed or framed by a sheltering element such as an awning, arcade or portico in order to provide shelter from the summer sun and winter weather.

- We believe that the central plaza arrangement enhances the design in several other significant ways. Each unit faces a landscaped, common, open space as opposed to the rear of another unit, which in turn enhances social engagement and a sense of community. Practically, this arrangement allows for greater density of dwelling units while minimizing and consolidating driveway surfaces. 1.2.2(J) improving the design, quality and character of new development. Orienting the dwelling units toward the adjacent streets would negate many of the positive qualities of the proposed design. See the attached architectural renderings of the proposed development.

- While some features mark a departure from more standard layouts, we believe that the overall design of the proposed development does not diverge from the underlying intent of the LUC except in nominal and inconsequential ways, and is not detrimental to the public good in any way.

Staff Finding

Staff finds that the request for a Modification of Standard to Section 3.5.2(E)(2) is justified by the applicable standards in 2.8.2(H) (1) and (4).

A. The granting of the Modification would not be detrimental to the public good and;

B. The project design satisfies Criteria 1 (2.8.2(H)(1): *The plan as submitted will promote the general purpose of the standard for which the modification is requested equally well or better than would a plan which complies with the standard for which a modification is requested.*

   Staff finds that the overall pattern of drive aisles servicing 18 dwelling units within the development is reasonably small in scale, with the circulation pattern providing four “T” intersections within the development and two dead-end drive aisles that significantly contribute to the safety of the “shared drive” configuration, and in combination with the other elements provided – including a distinct paving pattern that defines the pedestrian edge, a detached transitional sidewalk near the project entrance, speed bumps and caution signage – the plan provides an alternative design to a *connecting walkway* in a manner that is equal to a development plan that complies with the standard.

   Additionally, the proposed design does not deviate from the intent of the *residential building standards* that encourage, and in most cases require, that

the visual impacts of garage doors are mitigated if located at the front of the house along with a front door. The intent of this standard is described in the *purpose and general standard* of *Section 3.5.2 Residential Building Standards* that states (underlined for emphasis):

(A) Purpose. The standards of this Section are intended to promote variety, visual interest and pedestrian-oriented streets in residential development.

(B) General Standard. Development projects containing residential buildings shall place a high priority on building entryways and their relationship to the street. Pedestrian usability shall be prioritized over vehicular usability. Buildings shall include human-scaled elements, architectural articulation, and in projects containing more than one (1) building, design variation.

Typically when a standard *connecting walkway* is provided, this ensures that the garage door faces are either located behind building entrances with covered porches that project out in front of the garages, or the garages are located in alleys so that the front of the buildings are not dominated by garage doors, but rather the front porch becomes the dominant front-facing element.

The typical way that the *purpose and general standard* is achieved is outlined in *Section 3.5.2(F) Garage Doors*:

(F) Garage Doors. To prevent residential streetscapes from being dominated by protruding garage doors, and to allow the active, visually interesting features of the house to dominate the streetscape, the following standards shall apply:

(1) Street-facing garage doors must be recessed behind either the front facade of the ground floor living area portion of the dwelling or a covered porch (measuring at least six [6] feet by eight [8] feet) by at least four (4) feet. Any street-facing garage doors complying with this standard shall not protrude forward from the front facade of the living area portion of the dwelling by more than eight (8) feet.

(2) Garage doors may be located on another side of the dwelling ("side- or rear-loaded") provided that the side of the garage facing the front street has windows or other architectural details that mimic the features of the living portion of the dwelling.

(3) Garage doors shall not comprise more than fifty (50) percent of the ground floor street-facing linear building frontage. Alleys and corner lots are exempt from this standard.

(4) Attached and multi-family dwellings which also face a second street or a major walkway spine shall be exempt from subsections (1) through (3) above. The façade oriented to the second street or walkway spine shall include windows, doorways and a structured transition from public to private areas using built elements such as porch features, pediments, arbors, low walls, fences, trellis work and/or similar elements integrated with plantings.

(5) Alternative garage door treatments shall be accepted by the Director if:

(a) the configuration of the lot or other existing physical condition of the lot makes the application of these standards impractical; and

(b) the proposed design substantially meets the intent of this Code to line streets with active living spaces, create pedestrian-oriented streetscapes and provide variety and visual interest in the exterior design of residential buildings.

Typically, if a development orients its building towards a *street sidewalk or connecting walkway* (as defined by the code), as is typically required by the code – then the potential negative impacts of garage doors are mitigated, because the garages doors would be recessed or located behind the dwellings in an alley. Therefore, while the garage door standards don't directly apply (because the buildings do not face a street sidewalk), any alternative design that eliminates the *connecting walkway* needs to demonstrate that it significantly, and overwhelmingly, complies with the *purpose and general standard of the residential building standards, as well as the intent of the garage door standards* as described and emphasized above.

The alternative garage door standards outlined above also provide direction on how this alternative design may be achieved without a *connecting walkway*. In summary, eliminating the connecting walkway must not only provide a safe, attractive alternative walkway design – which it does by providing the "enhanced shared drive" components outline above – it must also mitigate the garage doors and provide appropriate entrance features.

Staff finds that the Modification request's overall "shared street" design provides an appropriate alternative design that *continues to promote the general purpose of the standard* by meeting the *purpose and general standard* of *Section 3.5.2 Residential Building Standards* and intent of the *garage door standards* by providing:

- Enhanced garage doors with two distinctly different garage door designs;
- A variety of entrance "shade arbor" structures that project out in front of the garage doors to provide a varied edge;

- Projecting trellis elements above the garage doors;
- Outdoor living spaces above the garages;
- Canopy shade trees that project out in front of the garage doors.

Staff finds that all of these "streetscape" elements work in tandem with the "shared street" design to meet the intent of the standards by:

- *lining streets with active living spaces, creating pedestrian-oriented streetscapes, providing variety and visual interest in the exterior design of residential buildings;*
- *promoting variety, visual interest and pedestrian-oriented streets in residential development;*
- *placing a high priority on building entryways and their relationship to the street;*
- *including human-scaled elements, architectural articulation, and building design variation.*

C. The project design satisfies Criteria 4 (2.8.2(H)(4): *The plan as submitted will not diverge from the standards of the Land Use Code that are authorized by this Division to be modified except in a nominal, inconsequential way when considered from the perspective of the entire development plan, and will continue to advance the purposes of the Land Use Code as contained in Section 1.2.2.*

Staff finds that the modification is nominal and inconsequential when considered from the perspective of the entire development plan because the circulation pattern, paving and traffic control enhancements provided contribute to a safe condition and provide residents and visitors notice of the "shared drive" condition – while enabling the development area to be compressed towards the interior of the property, so that additional buffer space is available to the west – and the plan continues to advance the purposes of the Land Use Code as contained in Section 1.2.2 including:

1.2.2 (J) improving the design, quality and character of new development.

1.2.2 (M) ensuring that development proposals are sensitive to the character of existing neighborhoods.

5. Neighborhood Meeting

Two neighborhood meetings were held for the proposed project, on April 28, 2014 and November 17, 2014. Detailed meeting minutes and letters from the neighbors are

attached with this staff report. A summary of the neighbor's concerns and the applicant's responses is included below:

1st Neighborhood meeting (perimeter alleyway design with garages facing outward):

1) Privacy – concerns that the decks in the rear yards of adjacent homes to the west will be visible from the proposed development.
   - The applicant may elect to comment further on this at the hearing. The building/patios were set back further from the west property line to provide more space for blocking site-lines and transitional landscaping.

2) Preference for a layout plan with a backyard-to-backyard relationship.
   - The applicant changed the site plan layout to eliminate the perimeter alley and provide a backyard-to-backyard relationship.

3) Concern with the safety of the detention pond located along Gilgalad, children playing in the detention area.
   - The detention pond has been eliminated.

4) Concerns that the new entrance location from Gilgalad will affect safety for the school bus stop.
   - This concern may warrant further discussion and clarification at the hearing. City Traffic Operations staff may also be available to provide comments at the hearing if needed.

5) Concerns that the project's stormwater drains to the storm drain in Hill Pond Road and then drains through the Windtrail development; and that the Applicant should have to ask the Windtrail HOA if a project can drain through the Windtrail HOA property.
   - The applicant may elect to comment further on this at the hearing. City Stormwater staff may also be available to provide comments at the hearing if needed.

2nd Neighborhood meeting (current site plan layout):

1) Concerns that residents will park along the main drive aisles along the interior portions of the property.
   - No parking / fire lane signage will be required by Poudre Fire Authority along appropriate portions of the interior drive aisles to address this concern.

2) Concerns that the drainage outflow onto the street should not be allowed and that the drainage should tie directly into Spring Creek.

- The applicant may elect to comment further on this at the hearing. City Stormwater staff may also be available to provide comments at the hearing if needed.

3) Concerns that residents or guests will park too close to the Hill Pond / Gilgalad intersection.
   - The applicant may elect to comment further on this at the hearing. City Traffic Operations staff may also be available to provide additional comments at the hearing if needed.

4) An existing tree along west side of property has dead branches – concerns that the branches will fall on the neighbor's house to the west.
   - This tree was re-evaluated by staff and the applicant's arborist and is now proposed to be removed.

5) Not enough guest parking is provided.
   - The applicant may elect to comment further on this at the hearing. Staff did comment on this subject at the 2nd neighborhood meeting explaining that on-street parking is permitted along the Hill Pond and Gilgalad street frontages.

6) Locations for on-site snow stockpiling should be considered.
   - One adjustment to the plans that staff can address should the project proceed to the final plan stage is moving one of the proposed bur oaks from the east side of the central lawn area to the southeast portion of the site. This will accommodate better access to the central lawn area for snow stockpiling.

6. Findings of Fact/Conclusion

In evaluating the Hill Pond Residences Project Development Plan (PDP), staff makes the following findings of fact:

A. The PDP complies with process located in Division 2.2 – Common Development Review Procedures for Development Applications of Article 2 – Administration.

B. The PDP complies with relevant standards located in Division 4.6, Medium Density Mixed-Use Neighborhood (M-M-N) zone district.

C. The PDP complies with the relevant standards located in Article 3 – General Development Standards, provided that the Modification of Standard is approved.

D. The Modification of Standard to Section 3.5.2(D)(1) meets the applicable requirements of Section 2.8.2(H), and the granting of this Modification would not be detrimental to the public good.

The Modification satisfies Criteria 1 (2.8.2(H)(1): *The plan as submitted will promote the general purpose of the standard for which the modification is requested equally well or better than would a plan which complies with the standard for which a modification is requested.*

Staff finds that the overall pattern of drive aisles servicing 18 dwelling units within the development is small in scale, with the circulation pattern providing four "T" intersections within the development and two dead-end drive aisles that significantly contribute to the safety of the "shared drive" configuration, and in combination with the other elements provided – including a distinct paving pattern that defines the pedestrian edge, a detached transitional sidewalk near the project entrance, speed bumps and caution signage – the plan provides an alternative design to a *connecting walkway* in a manner that is equal to a development plan that complies with the standard.

Staff finds that the Modification Request's "enhanced private drive" design provides an appropriate alternative design that *continues to promote the general purpose of the standard* by meeting the *purpose and general standard* of *Section 3.5.2 Residential Building Standards* and intent of the *garage door standards* by providing:

- Enhanced garage doors with two distinctly different garage door designs;
- A variety of entrance "shade arbor" structures that project out in front of the garage doors to provide a varied edge;
- Projecting trellis elements above the garage doors;
- Outdoor living spaces above the garages;
- Canopy shade trees that project out in front of the garage doors.

Staff finds that all of these "streetscape" elements work in tandem with the "shared street" design to meet the intent of the standards by:

- *lining streets with active living spaces, creating pedestrian-oriented streetscapes, providing variety and visual interest in the exterior design of residential buildings;*

- *promoting variety, visual interest and pedestrian-oriented streets in residential development;*
- *placing a high priority on building entryways and their relationship to the street;*
- *including human-scaled elements, architectural articulation, and building design variation.*

The Modification satisfies Criteria 4 (2.8.2(H)(4): *The plan as submitted will not diverge from the standards of the Land Use Code that are authorized by this Division to be modified except in a nominal, inconsequential way when considered from the perspective of the entire development plan, and will continue to advance the purposes of the Land Use Code as contained in Section 1.2.2.*

Staff finds that the modification is nominal and inconsequential when considered from the perspective of the entire development plan because the circulation pattern, paving and traffic control enhancements provided contribute to a safe condition and provide residents and visitors visual notice of the "shared drive" condition – while enabling the development area to be compressed towards the interior of the property, so that additional buffer space is available to the west – and the plan continues to advance the purposes of the Land Use Code as contained in Section 1.2.2 including:

1.2.2 (J) improving the design, quality and character of new development.

1.2.2 (M) ensuring that development proposals are sensitive to the character of existing neighborhoods.

RECOMMENDATION:

Approval of the Hill Pond Residences Project Development Plan and Modification of Standard

ATTACHMENTS:

1. Applicant's Modification of Standard Request
2. Site Plan
3. Landscape Plan
4. Tree Mitigation Plan
5. Building Elevations
6. Setback Exhibit
7. Plat
8. Utility Plans
9. Drainage Report

10. Letters from Neighbors
11. Meeting Minutes from 1st Neighborhood Meeting
12. Meeting Minutes from 2nd Neighborhood Meeting
13. Ecological Characterization Study

February 12, 2015

Modification Request for Connecting Walkway Standard.
910 Hill Pond Road - Project Development Plan (PDP).

Modification Description:

This is a Modification Request to Section 3.5.2(D)(1), which addresses orientation to a connecting walkway.

The project requests that an *enhanced shared drive* be used to satisfy the *connecting walkway and major walkway spine* requirement in LUC 3.5.2(D), so that the project dwelling's primary entrances connect to the public street using an *enhanced shared drive* in which vehicle, pedestrian and bicycle routes are shared within the enhanced drive areas of the proposed plan.

Land Use Code Standard Proposed to be Modified:

LUC 3.5.2(D)(1):
(D) Relationship of Dwellings to Streets and Parking.

(1) Orientation to a Connecting Walkway. Every front facade with a primary entrance to a dwelling unit shall face the adjacent street to the extent reasonably feasible. Every front facade with a primary entrance to a dwelling unit shall face a connecting walkway with no primary entrance more than two hundred (200) feet from a street sidewalk. The following exceptions to this standard are permitted:

(a) Up to two (2) single-family detached dwellings on an individual lot that has frontage on either a public or private street.

(b) A primary entrance may be up to three hundred fifty (350) feet from a street sidewalk if the primary entrance faces and opens directly onto a connecting walkway that qualifies as a major walkway spine.

(c) If a multi-family building has more than one (1) front facade, and if one (1) of the front facades faces and opens directly onto a street sidewalk, the primary entrances located on the other front facade(s) need not face a street sidewalk or connecting walkway.

Other Relevant Standards:

Any modification to the connecting walkway standard must demonstrate compliance with 3.2.2(A),(B),(C)(1)(a) and 3.2.2(D)(1), which state:

3.2.2 Access, Circulation and Parking (areas underlined for emphasis)

(A) <u>Purpose. This Section is intended to ensure that the parking and circulation aspects of all developments are well designed with regard to safety, efficiency and convenience for vehicles, bicycles, pedestrians and transit, both within the development and to and from surrounding areas.</u> Sidewalk or bikeway extensions off-site may be required based on needs created by the proposed development. This Section sets forth parking requirements in terms of numbers and dimensions of parking stalls, landscaping and shared parking. It also addresses the placement of drive-in facilities and loading zones.

(B) General Standard. The parking and circulation system within each development shall accommodate the movement of vehicles, bicycles, pedestrians and transit, throughout the proposed development and to and from surrounding areas, safely and conveniently, and shall contribute to the attractiveness of the development. The on-site pedestrian system must provide adequate directness, continuity, street crossings, visible interest and security as defined by the standards in this Section. The on-site bicycle system must connect to the city's on-street bikeway network. Connections to the off-road trail system shall be made, to the extent reasonably feasible.

(C) Development Standards. All developments shall meet the following standards:

(1) Safety Considerations. To the maximum extent feasible, pedestrians shall be separated from vehicles and bicycles.

(a) Where complete separation of pedestrians and vehicles and bicycles is not possible, potential hazards shall be minimized by the use of techniques such as special paving, raised surfaces, pavement marking, signs or striping, bollards, median refuge areas, traffic calming features, landscaping, lighting or other means to clearly delineate pedestrian areas, for both day and night use.

(D) Access and Parking Lot Requirements. All vehicular use areas in any proposed development shall be designed to be safe, efficient, convenient and attractive, considering use by all modes of transportation that will use the system, (including, without limitation, cars, trucks, buses, bicycles and emergency vehicles).

(1) Pedestrian/Vehicle Separation. To the maximum extent feasible, pedestrians and vehicles shall be separated through provision of a sidewalk or walkway. Where complete separation of pedestrian and vehicles is not feasible, potential hazards shall be minimized by using landscaping, bollards, special paving, lighting and other means to clearly delineate pedestrian areas.

Relevant LUC Definitions:
A connecting walkway and *major walkway spine* are defined in Article 5 of the LUC as:
Connecting walkway shall mean (1) any street sidewalk, or (2) any walkway that directly connects a main entrance of a building to the street sidewalk without requiring pedestrians to walk across parking lots or driveways, around buildings or around parking lot outlines which are not aligned to a logical route. *Major walkway spine* shall mean a tree-lined connecting walkway that is at least five (5) feet wide, with landscaping along both sides, located in an outdoor space that is at least thirty-five (35) feet in its smallest dimension, with all parts of such outdoor space directly visible from a public street.

Maximum extent feasible is defined in Article 5 of the LUC as:
Maximum extent feasible shall mean that no feasible and prudent alternative exists, and all possible efforts to comply with the regulation or minimize potential harm or adverse impacts have been undertaken. (code already includes underline emphasis)

Land Use Code Modification Criteria:

"The decision maker may grant a modification of standards only if it finds that the granting of the modification would not be detrimental to the public good, and that:

(1) the plan as submitted will promote the general purpose of the standard for which the modification is requested equally well or better than would a plan which complies with the standard for which a modification is requested; or

(2) the granting of a modification from the strict application of any standard would, without impairing the intent and purpose of this Land Use Code, substantially alleviate an existing, defined and described problem of city-wide concern or would result in a substantial benefit to the city by reason of the fact that the proposed project would substantially address an important community need specifically and expressly defined and described in the city's Comprehensive Plan or in an adopted policy, ordinance or resolution of the City Council, and the strict application of such a standard would render the project practically infeasible; or

(3) by reason of exceptional physical conditions or other extraordinary and exceptional situations, unique to such property, including, but not limited to, physical conditions such as exceptional narrowness, shallowness or topography, or physical conditions which hinder the owner's ability to install a solar energy system, the strict application of the standard sought to be modified would result in unusual and exceptional practical difficulties, or exceptional or undue hardship upon the owner of such property, provided that such difficulties or hardship are not caused by the act or omission of the applicant; or

(4) the plan as submitted will not diverge from the standards of the Land Use Code that are authorized by this Division to be modified except in a nominal, inconsequential way when considered from the perspective of the entire development plan, and will continue to advance the purposes of the Land Use Code as contained in Section 1.2.2.

Any finding made under subparagraph (1), (2), (3) or (4) above shall be supported by specific findings showing how the plan, as submitted, meets the requirements and criteria of said subparagraph (1), (2), (3) or (4).

Modification Criteria, Justification Narrative:

This request of approval for this modification complies with the standards per Review Criteria 2.8.2(H)(1) and (4) in the following ways:

> **Criteria (1):** the plan as submitted will promote the general purpose of the standard for which the modification is requested equally well or better than would a plan which complies with the standard for which a modification is requested.
>
> **Justification Narrative:**
>
> - **The *enhanced shared drive* proposed in the design, while appearing non-compliant, can be shown to satisfy the intent of the "connecting walkway" required by the LUC Standard.**
> - **The *enhanced shared drive* provides circulation for auto, bicycle and pedestrian traffic without many of the standard means of separation between the modes. However, there are many features at play in the proposed design to ensure the safety of all users:**
>   - **Speed bump and "slow" signage (see attached photos) at the entrance to the development send a visual and physical message to drivers that they are entering a pedestrian zone and must be cautious.**
>   - **Color differentiation of pavement to delineate auto/bicycle lane from pedestrian walkway. Similarly, changes in paving imply an edge between common drive/walkway and dwelling entries, garage entries and parking.**
>   - **The drive layout consists of short straight-a-ways ending in T intersections. As a result cars could reasonably be expected to remain at lower speeds, not having the distance required to easily, or inadvertently, attain higher speeds.**
>   - **The small scale of the interior plaza and driveway constrains traffic sufficiently to raise awareness and reduce speed, but still provides adequate visibility to reasonably avoid surprises**

  - **Though the *enhanced shared drive* is "street-like", it is a private drive and thereby only serves a limited number of users (18 dwelling units). Conflicts associated with increasing traffic will be practically nonexistent for the life of the project regardless of how the surrounding neighborhood evolves.**
  - **The landscaping in the planting beds at the dwelling facades fulfills a traffic calming function as well as provides a 7 foot deep buffer between private garages/entrances and public circulation.**
- **These elements of the proposed design, when combined, provide strong cues for car operators to recognize the shared nature of the space, to appreciate the potential for conflict afforded by irresponsible driving, and to adjust to appropriate speeds and behavior.**
- **These, and many similar, features have been successfully utilized in urban areas to safely accommodate multi-modal transportation as well as other social activities (most notably, perhaps, in examples of the Dutch woonerf). See attached photos.**
- **By providing detached walks at the project entry and a distinct, color differentiated, walking zone in the multimodal area, the *enhanced shared drive*, we believe, provides pedestrian users with a safe, direct path to the public street sidewalk equally well or better than a traditional connecting walkway as described in the LUC Standard**

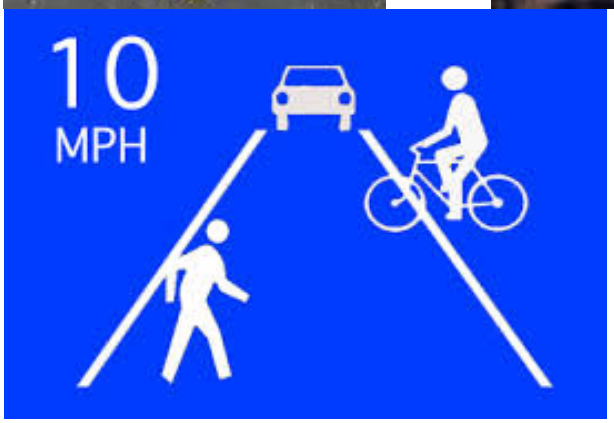
Criteria(4): The plan as submitted will not diverge from the standards of the Land Use Code that are authorized by this Division to be modified except in a nominal, inconsequential way when considered from the perspective of the entire development plan, and will continue to advance the purposes of the Land Use Code as contained in Section 1.2.2.

Justification Narrative:

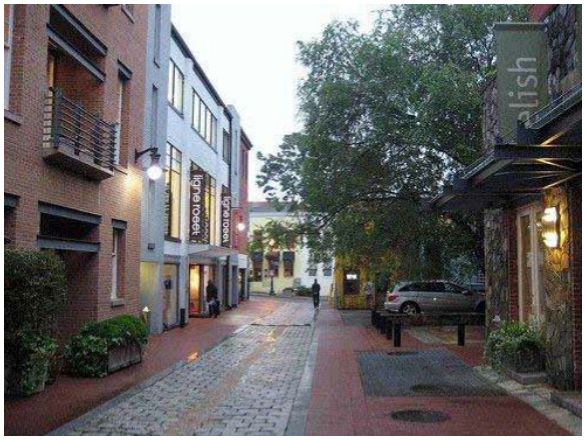
- **The interior, private *shared enhanced drive* is designed to comfortably, and safely accommodate auto traffic within the same area as pedestrian circulation. A separated car alley around the perimeter of the lot, behind the dwelling units, is a common feature in similar developments. However, this "back" alley would typically not be adorned with traffic calming devices, would consist of longer straight-a-ways encouraging higher speeds, but would still realistically be used by bikes and pedestrians and would in many ways pose a greater risk to these users than a shared, interior drive with the above mentioned safety features.**
- **The predominant orientation of the surrounding dwellings is with garages to the front and back yards facing each other. By eliminating the outside perimeter car alley we present the landscaped rear facades of our dwelling units to the back yards of the neighboring homes** (1.2.2(M) ensuring that development proposals are sensitive to the character of existing neighborhoods)**.**
- **The garage doors share the front façade of the dwelling units with the main entry but because they are given different design treatments they serve to help differentiate, rather than homogenize, the facades. The variations in plane, material and massing of the facades combined with other design features serves to promote the spirit of other relevant portions of the LUC:**
  - 1.2.2(J) improving the design, quality and character of new development.
  - 3.5.3(E)(2)(3) *Facades.* Facades that face streets or connecting pedestrian frontage shall be subdivided and proportioned using features such as windows, entrances, arcades, arbors, awnings, treillage with vines, along no less than fifty (50) percent of the façade.

- 3.5.3(E)(2)(4) *Entrances.* Primary building entrances shall be clearly defined and recessed or framed by a sheltering element such as an awning, arcade or portico in order to provide shelter from the summer sun and winter weather.

- **We believe that the central plaza arrangement enhances the design in several other significant ways. Each unit faces a landscaped, common, open space as opposed to the rear of another unit, which in turn enhances social engagement and a sense of community. Practically, this arrangement allows for greater density of dwelling units while minimizing and consolidating driveway surfaces.** 1.2.2(J) improving the design, quality and character of new development. **Orienting the dwelling units toward the adjacent streets would negate many of the positive qualities of the proposed design. See the attached architectural renderings of the proposed development.**
- **While some features mark a departure from more standard layouts, we believe that the overall design of the proposed development does not diverge from the underlying intent of the LUC except in nominal and inconsequential ways, and is not detrimental to the public good in any way.**



Examples of speed reducing signs and speed bumps.



Examples of existing multi-modal drives with traffic calming features and pavement surface differentiation.

Architectural renderings of the proposed Hill Pond Properties development:

Architectural renderings of the proposed Hill Pond Properties development:

Architectural renderings of the proposed Hill Pond Properties development:

Examples of concrete paving block driveway design intent:

Approx. 4”x8” concrete block pavers at pervious driveway surface.

Two block colors to designate vehicle and pedestrian paths.

PROPERTY DESCRIPTION

A tract of land located in the Northwest Quarter of Section 23, Township 7 North, Range 69 West of the 6th P.M., Larimer County, and a replat of a portion of Tract "H", Third Replat of Hill Pond on Spring Creek, First Filing, City of Fort Collins, State of Colorado, being more particularly described as follows:

Beginning at the Southwest corner of Tract"H", Third Replat Of Hill Pond on Spring Creek, First Filing; thence along the westerly line of said Tract "H", North 12° 20' 00" West, 243.78 feet; thence, North 75° 45' 17" East, 325.05 feet; thence, South 10° 02' 03" East, 259.67 feet to the northerly right-of-way line of Gilgalad Way; thence along said line the following 4 courses and distances: South 34° 27' 15" West, 47.72 feet; thence along a curve concave to the northwest having a central angle of 09° 59' 56" with a radius of 156.00 feet, an arc length of 27.22 feet and a chord of which bears South 39° 27' 15" West, 27.19 feet; thence, South 44° 27' 14" West, 80.64 feet; thence along a curve concave to the north having a central angle of 78° 19' 19" with a radius of 15 feet, an arc length of 20.50 feet and the chord of which bears South 83° 36' 55" West, 18.95 feet to the northerly right-of-way line of Hill Pond Road; thence along said line and along a curve concave to the southwest having a central angle of 31° 36' 36" with a radius of 362.08 feet, an arc length of 199.76 feet and the chord of which bears North 73° 01' 44" West, 197.24 feet to the Point of Beginning.

SITE NOTES:

Property Lines, Easements and all Metes and Bounds information provided by:
Intermill Land Surveying, Inc. Project # P-13-746).

Parcel Number: 97232-15-028

Existing Zoning: M-M-N

Parcel Size: Gross Area = 2.178 Acres (94,912 s.f.)
(No Dedicated Easements existing within the property so Net Area = Gross Area = 2.178 Acres)

DWELLING UNITS

Type A - 6 (2 Story, 3 Bed Room, 2,342 s.f.)
Type B - 10 (2 Story, 3 Bed Room, 2,045 s.f.)
Type C - 2 (2 Story, 3 Bed Room, 2,032 s.f.)
Total 18

Maximum Building Height = 29'-0"

18 Units/2.18 Acres = 8.26 Dwelling Units per Acre

FLOOR AREA RATIO

Total Floor Area = 39,366 s.f.

Site Area = 94,912 s.f.

Floor Area Ratio = 42%

LOT COVERAGE

Site Area = 94,912 s.f.

Building coverage = 31,300 s.f. / 94,912 s.f. = 33%

Driveway/Parking = 27,236 s.f. / 94,912 s.f. = 29%

Private Patios = 3,880 s.f. / 94,921 s.f. = 4%

Open space = 32,496 s.f. / 94,912 s.f. = 34%

100%

PARKING (no parking outside of designated spaces)

Car:

Each Dwelling Unit has a 2-Car Garage.
(2 spaces required for a 3 bedroom dwelling unit)

Additional Guest Spaces: 10 (including 1 HC space)

Typical Guest Space Dimensions: 9'-0"W x 19'-0"L

HC Space Dimensions: 9'-0"W x 19'-0"L with adjacent striped area at 9'-0"W x 19'-0"L.

Bicycle:

1 Central Fixed Rack = 4 bicycle spaces.

PARKING/DRIVEWAY LANDSCAPING:

Gross Vehicle Use Area = 19,245 s.f.

Landscaped Area = 2,731 s.f.

Landscaping Coverage = 14%

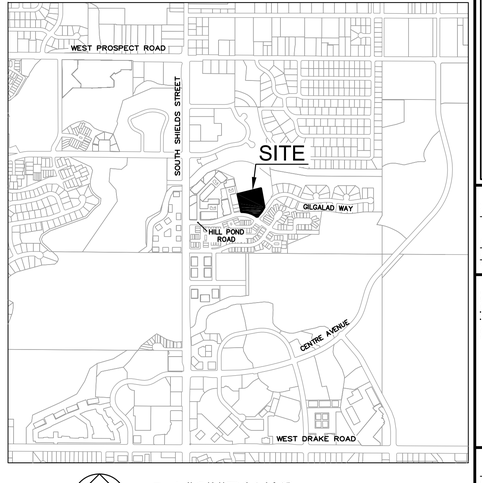
LANDSCAPE LEGEND

24"(C) : Existing Tree to Remain
18"(D) : Existing Tree to be Removed
(C) coniferous
(D) deciduous

(See Landscape Drawings for detailed Mitigation Plan)
aerial

PAVEMENT LEGEND

- Paver #1: Vehicle use area (color #1)
- Concrete #1: Entry drive, Sidewalks, Parking, Patios
- Paver #2: Pedestrian walkway (color #2)
- Concrete #2: 12" wide apron around pavers



NORTH

2 VICINITY MAP
NO SCALE

NORTH

1 SITE PLAN
SCALE: 1" = 20'-0"
0 10 20 40 60

SITE PLAN

john dengler & ASSOCIATES, P.C. ARCHITECTS & PLANNERS
5336 Highcastle court fort collins, colorado 80525 (970) 223-1512

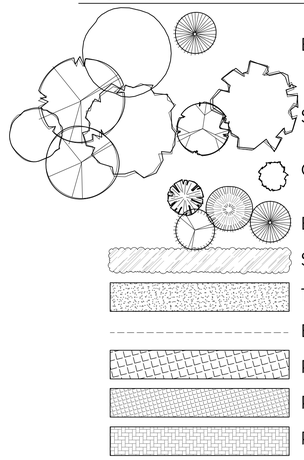
Hill Pond Residences

910 Hill Pond Road
Fort Collins, Colorado

by: jhd
date: 2.11.2015
revisions:
sheet: 1 of 1

A FREE PERMIT MUST BE OBTAINED FROM THE CITY FORESTER BEFORE ANY STREET TREES ARE PLANTED IN PARKWAYS BETWEEN THE SIDEWALK AND CURB. STREET TREE LOCATIONS AND NUMBERS MAY CHANGE TO MEET ACTUAL UTILITY/TREE SEPARATION STANDARDS. LANDSCAPE CONTRACTOR MUST OBTAIN APPROVAL OF STREET TREE LOCATIONS AFTER UTILITY LOCATES. STREET TREES MUST BE INSPECTED AN APPROVED BEFORE PLANTING AND ISSUANCE OF THE PERMIT. FAILURE TO OBTAIN THIS PERMIT IS A VIOLATION OF THE CODE OF THE CITY OF FORT COLLINS.

LEGEND



HILL POND PLANT LIST 02/13/15							
KEY	COMMON NAME	BOTANICALL NAME	QTY.	SIZE	%	RMKS.	MITIGATION
SHADE TREES							
BO	Bur Oak	Quercus macrocarpa	6	3" cal.	9.0%	B & B	upsized for mitigation
BTM	Big Tooth Maple	Acer grandidentatum	3	3" cal.	4.5%	B & B	upsized for mitigation
CPO	Chinkapin Oak	Quercus muehlenbergii	4	3" cal.	6.0%	B & B	upsized for mitigation
CSO	Crimson Spire Oak	Quercus Crimson Spire	7	3" cal.	11.5%	B & B	upsized for mitigation
GL	Glenleven Linden	Tilia x flavescens 'Glenleven'	8	3" cal.	11.9%	B & B	upsized for mitigation
GMSM	Green Mountain Sugar Maple	Acer saccharum 'Green Mountain'	3	3" cal.	4.5%	B & B	upsized for mitigation
HB	Northern Hackberry	Celtis occidentalis	4	3" cal.	6.0%	B & B	upsized for mitigation
KCT	Kentucky Coffeetree	Gymnocladus dioicus	3	3" cal.	4.5%	B & B	upsized for mitigation
SHL	Shademaster Honeylocust	Gleditsia triacanthos inermis 'Shademaster'	2	3" cal.	3.0%	B & B	upsized for mitigation
WC	Western Catalpa	Catalpa speciosa	5	3" cal.	7.5%	B & B	upsized for mitigation
			45				45 TREES TOTAL
ORNAMENTAL TREES							
TC	Thunderchild Crabapple	Malus 'Thunderchild'	5	2.5" cal.	7.5%	B & B	upsized for mitigation
			5				2.5 TREES TOTAL
EVERGREEN TREES							
AP	Austrian Pine	Pinus nigra	7	8' ht.	10.4%	B & B	upsized for mitigation
CBS	Hoopsii Blue Spruce	Picea pungens'Hoopsii'	4	8' ht.	6.0%	B & B	upsized for mitigation
PP	Pinyon Pine	Pinus edulis	2	8' ht.	3.0%	B & B	upsized for mitigation
SWWP	Southwestern White Pine	Pinus strobus	4	8' ht.	6.0%	B & B	upsized for mitigation
			17				17.0 TOTAL
		TOTAL TREES:	67		87.6%		64.5 TREES TOTAL
DECIDUOUS SHRUBS							
BPL	Miss Canada Lilac	Syringa x prestoniae 'Miss Canada'		5 gallon		6' o.c.	
GDP	Gold Drop Potentilla	Potentilla fruticosa 'Gold Drop'		5 gallon		3' o.c.	
IBR	Iceberg Rose	Rosa x 'Iceberg' Floribunda Rose		5 gallon		3' o.c.	
MBCB	Magic Berry Coralberry	Symphoricarpos x doorenbosii 'Magic Berry'		5 gallon		2.5' o.c.	
MCB	Marleen Coralberry	Symphoricarpos x doorenbosii		5 gallon		2.5' o.c.	
MKL	Miss Kim Lilac	Syringa patula 'Miss Kim'		5 gallon		4' o.c.	
NWR	Nearly Wild Rose (Floribunda)	Rosa x 'Nearly Wild'		5 gallon		3' o.c.	
OGH	Oregon Grape Holly	Mahonia aquifolium		5 gallon		7' o.c.	
PBBB	Petite Plum Dwarf Butterfly Bush	Buddleja davidii nanhoensis `Monum`		5 gallon		5' o.c.	
PL	Royalty Lilac	Syringa x josiflexa 'Royalty'		5 gallon		6' o.c.	
RKOR	Rainbow Knock Out Rose	Rosa x 'Radco'		5 gallon		3' o.c.	
SC	Spreading Cotoneaster	Cotoneaster divaricatus		5 gallon		5' o.c.	
WL	Mount Baker Canadian Lilac	Syringa x hyacinthiflora 'Mount Baker'		5 gallon		6' o.c.	
YSR	Harison's Yellow Shrub Rose	Rosa x harisonii		5 gallon		4' o.c.	
		TOTAL	0				
EVERGREEN SHRUBS							
BSJ	Blue Star Juniper	Juniperus squamata 'Blue Star'		5 gallon		3' o.c.	
		TOTAL	0				
		TOTAL SHRUBS:	0				
ORNAMENTAL GRASSES							
DFG	Dwarf Fountain Grass	Pennisetum alopecuroides 'Hameln'		5 gallon		18" o.c.	
VMG	Varigated Maiden Grass	Miscanthus sinensis 'Varigatus'		5 gallon		24" o.c.	
		TOTAL SHRUBS:	0				
PERENNIALS, GROUNDCOVERS & VINES							
DL	Stella De Oro Dwarf Daylily	Hemerocallis x 'Stella de Oro'		5 gallon		12" o.c.	
HL	Hidcote Lavender	Lavandula angustifolia 'Hidcote'		5 gallon		15" o.c.	
ML	English Lavender	Lavandula angustifolia 'Munstead		5 gallon		15" o.c.	
SW	Sweet Woodruff	Galium odoratum (Asperula odoxata)		5 gallon		12" o.c.	
		TOTAL PERENNIALS:	0				
NOTE: EXACT SPECIES OF SHRUBS AND PERENNIALS TO BE SELECTED FROM THE FORT COLLINS RECOMMENDED PLANT LIST AT TIME OF FINAL							
NATIVE SEED MIX:							
30%	Western Wheatgrass						
25%	Sheep Fescue						
20%	Perennial Rye						
15%	Chewings Fescue						
10%	Kentucky Bluegrass						
SEED MIX TO BE DRILLED AT RATE OF 16-24 LBS/PLS/ACRE.							

STREET TREE NOTES:

1. STREET TREES SHALL BE SUPPLIED AND PLANTED BY THE DEVELOPER USING A QUALIFIED LANDSCAPE CONTRACTOR.
2. A PERMIT MUST BE OBTAINED FROM THE CITY FORESTER BEFORE ANY TREES OR SHRUBS AS NOTED ON THIS PLAN ARE PLANTED, PRUNED OR REMOVED ON THE PUBLIC RIGHT-OF-WAY. THIS INCLUDES THE ZONES BETWEEN THE SIDEWALK AND CURB, MEDIANS AND OTHER CITY PROPERTY. THIS PERMIT SHALL APPROVE THE LOCATION AND SPECIES TO BE PLANTED. FAILURE TO OBTAIN THIS PERMIT MAY RESULT IN REPLACING OR RELOCATING TREES AND A HOLD ON CERTIFICATE OF OCCUPANCY.
3. CONTRACT THE CITY FORESTER TO INSPECT ALL STREET TREE PLANTINGS AT THE COMPLETION OF EACH PHASE OF THE DEVELOPMENT. ALL TREES NEED TO HAVE BEEN INSTALLED AS SHOWN ON THE LANDSCAPE PLAN. APPROVAL OF STREET TREE PLANTING IS REQUIRED BEFORE FINAL APPROVAL OF EACH PHASE.
4. THE DEVELOPER SHALL REPLACE DEAD OR DYING STREET TREES AFTER PLANTING UNTIL FINAL MAINTENANCE INSPECTION AND ACCEPTANCE BY THE CITY OF FORT COLLINS FORESTRY DIVISION. ALL STREET TREES IN THE PROJECT MUST BE ESTABLISHED, OF AN APPROVED SPECIES AND OF ACCEPTABLE CONDITION PRIOR TO MAINTENANCE ACCEPTANCE.
5. STREET TREE LOCATIONS AND NUMBERS MAY BE ADJUSTED TO ACCOMMODATE DRIVEWAY LOCATIONS, UTILITY SEPARATIONS BETWEEN TREES, STREET SIGNS AND STREET LIGHTS. QUANTITIES SHOWN ON PLAN MUST BE INSTALLED UNLESS A REDUCTION OCCURS TO MEET SEPARATION STANDARDS.

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HILL POND RESIDENCES
910 Hill Pond Road
Fort Collins, Colorado

NOTICE DUTY OF COOPERATION

Release of these plans contemplates further cooperation among the owner, his contractor, and the landscape architect. Design and construction are complex. Although the landscape architect and their consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect, and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the landscape architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the landscape architect shall relieve the landscape architect from responsibility for all consequences. Changes made from the plans without consent of the landscape architect are unauthorized, and shall relieve the landscape architect of responsibility for all consequences arriving out of such changes.

Issue Date:

09/17/14 dwn by: osla
rev'd by: osla

Revisions

per staff comments	01/20/2015
per staff comments	02/13/2015

Sheet No.

LANDSCAPE PLAN

L1.0

LANDSCAPE NOTES:

1. ALL PLANT MATERIAL SHALL MEET SPECIFICATIONS OF THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN) FOR NUMBER ONE GRADE. ALL TREES SHALL BE BALLED AND BURLAPPED OR EQUIVALENT.
2. TREES SHALL NOT BE PLANTED CLOSER THAN 4' TO ANY GAS LINE CLOSER THAN 6' TO ANY WATER OR SEWER SERVICE LINE, AND NO CLOSER THAN 10' TO ANY WATER OR SEWER MAIN. TREE PLANTING SHALL BE COORDINATED WITH PUBLIC SERVICE COMPANY. A HORIZONTAL DISTANCE OF 40' BETWEEN STREET TREES AND STREET LIGHTS AND 15' BETWEEN ORNAMENTAL TREES AND STREET LIGHTS SHALL BE MAINTAINED. SHRUBS ARE NOT TO BE PLANTED WITHIN 4' OF ANY WATER OR SEWER MAINS. PLANT MATERIALS SHALL BE ADJUSTED IN THE FIELD TO MAINTAIN THE ABOVE CLEARANCES.
3. A PERMIT MUST BE OBTAINED FROM CITY FORESTER BEFORE ANY TREES OR SHRUBS AS NOTED ON THIS PLAN ARE PLANTED, PRUNED OR REMOVED ON THE PUBLIC RIGHT-OF-WAY. THIS INCLUDES ZONES BETWEEN THE SIDEWALK AND THE CURB, MEDIANS AND OTHER CITY PROPERTY. THIS PERMIT SHALL APPROVE THE LOCATION AND SPECIES TO BE PLANTED. FAILURE TO OBTAIN THIS PERMIT MAY RESULT IN REPLACING OR RELOCATING TREES AND A HOLD ON CERTIFICATE OF OCCUPANCY.
4. TREE REMOVAL TO BE OUTSIDE SONGBIRD NESTING SEASON (FEB 1 - JULY 31) OR CONDUCT A SURVEY OF TREES ENSURING NO ACTIVE NESTS IN THE AREA.
5. LANDSCAPE SHALL BE INSTALLED OR SECURED WITH A LETTER OF CREDIT, ESCROW, OR A PERFORMANCE BOND FOR 125% OF THE VALUE OF THE LANDSCAPING AND INSTALLATION PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
6. CONTACT THE CITY FORESTER TO INSPECT ALL STREET TREE PLANTINGS AT THE COMPLETION OF EACH PHASE OF THE DEVELOPMENT. ALL TREES NEED TO HAVE BEEN INSTALLED AS SHOWN ON THE LANDSCAPE PLAN. APPROVAL OF STREET TREE PLANTINGS IS REQUIRED BEFORE FINAL APPROVAL OF EACH PHASE.
7. LANDSCAPING WITH PUBLIC ROW AND COMMON OPEN SPACE AREAS SHALL BE INSTALLED BY THE DEVELOPER AND MAINTAINED BY THE OWNER.
8. DEVELOPER SHALL ENSURE THAT THE LANDSCAPE PLAN IS COORDINATED WITH THE PLANS DONE BY OTHER CONSULTANTS SO THAT THE PROPOSED GRADING, STORM DRAINAGE, OR OTHER CONSTRUCTION DOES NOT CONFLICT NOR PRECLUDE INSTALLATION AND MAINTENANCE OF LANDSCAPE ELEMENTS ON THIS PLAN.
9. ALL LANDSCAPE AREA WITHIN THE SITE SHALL BE IRRIGATED WITH AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. AN IRRIGATION PLAN, REVIEWED AND APPROVED BY THE WATER UTILITIES, WILL BE REQUIRED PRIOR TO ISSUANCE OF A BUILDING PERMIT.
10. ALL TURF AREA TO BE IRRIGATED WITH AN AUTOMATIC POP-UP SYSTEM. ALL SHRUB BEDS AND TREES, INCLUDING IN NATIVE SEED AREAS, ARE TO BE IRRIGATED WITH AN AUTOMATIC DRIP (TRICKLE) IRRIGATION SYSTEM, OR ACCEPTABLE ALTERNATIVE. THE IRRIGATION SYSTEM IS TO BE ADJUSTED TO MEET THE WATER REQUIREMENTS OF THE INDIVIDUAL PLANT MATERIAL.
11. ALL SHRUB BEDS TO BE MULCHED WITH A 3" LAYER OF SPECIFIED MULCH OR COBBLE OVER WEEK BARRIER.
12. EDGING BETWEEN GRASS AND SHRUB BEDS SHALL BE 1/8" X 4" STEEL SET LEVEL WITH TOP OF SOD.
13. IRRIGATED TURF TO BE SODDED WITH REVEILLE BLUEGRASS.
14. TO THE MAXIMUM EXTENT FEASIBLE, TOPSOIL THAT IS REMOVED DURING CONSTRUCTION ACTIVITY SHALL BE CONSERVED FOR LATER USE.
15. THE SOIL IN ALL LANDSCAPE AREAS, INCLUDING PARKWAYS AND MEDIANS, SHALL BE THOROUGHLY LOOSENED TO A DEPTH OF NOT LESS THAN 8" AND SOIL AMENDMENT SHALL BE THOROUGHLY INCORPORATED INTO THE SOIL OF ALL LANDSCAPE AREAS TO A DEPTH OF AT LEAST 6" BY TILLING, DISCING OR OTHER SUITABLE METHOD, AT A RATE OF AT LEAST 3 CUBIC YARDS OF SOIL AMENDMENT PER 1,000 SF OF LANDSCAPE AREA. TO PROTECT EXISTING TREES FROM ROOT DAMAGE, SO NOT CULTIVATE MORE THAN 2" DEEP WITH DROP ZONE OF EXISTING TREES.
16. STREET LANDSCAPING, INCLUDING STREET TREES, SHALL BE SELECTED AND MAINTAINED IN ACCORDANCE WITH ALL CITY CODES AND POLICIES.
17. ALL TREE PRUNING AND REMOVAL WORKS SHALL BE PERFORMED BY A CITY OF FORT COLLINS LICENSED ARBORS WHERE REQUIRED BY CODE.

TREE PROTECTION NOTES:

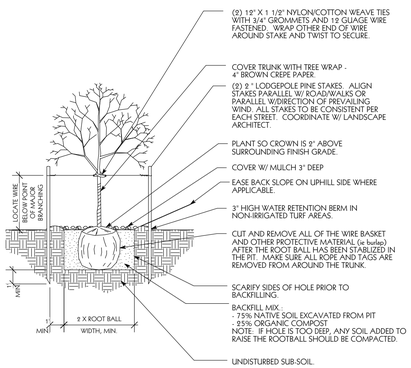
1. EXISTING TREES MARKED FOR PROTECTION AND PRESERVATION SHALL NOT BE REMOVED.
2. HEAVY EQUIPMENT SHOULD NOT BE ALLOWED TO COMPACT OVER THE ROOT ZONE OF EXISTING TREES.
3. AVOID CUTTING SURFACE ROOTS WHENEVER POSSIBLE. SIDEWALKS AND PAVING LEVELS SHOULD BE CONTOURED SUFFICIENTLY TO AVOID DAMAGE.
4. ROOT CUTS FROM EXCAVATION SHOULD BE DONE RAPIDLY. SMOOTH FLUSH CUTS SHOULD BE MADE. BACKFILL BEFORE THE ROOTS HAVE A CHANCE TO DRY OUT AND WATER THE TREE IMMEDIATELY.
5. PRIOR TO CONSTRUCTION , ALL PROTECTED TREES SHALL HAVE ORANGE PROTECTION BARRIER FENCING ERECTED, WHICH AS A MINIMUM ARE SUPPORTED BY 1" X 1" OR SIMILAR STURDY STOCK, FOR SHIELDING OF PROTECTED TREES, NO CLOSER THAN 6' FROM THE TRUNK OR 1/2 OF THE DRIP LINE, WHICH EVER IS GREATER. WITHIN THIS PROTECTION ZONE, THERE SHALL BE NO MOVEMENT OF EQUIPMENT OR STORAGE OF EQUIPMENT, MATERIALS, DEBRIS, FILL OR CUT UNLESS APPROVED BY THE CITY FORESTER.
6. WITHIN THE DRIP LINE OF ANY PROTECTED EXISTING TREE, THERE SHALL BE NO CUT OR FILL OVER A 4" DEPTH UNLESS A QUALIFIED ARBORS OR FORESTER HAS EVALUATED AND APPROVED THE DISTURBANCE.
7. DURING THE CONSTRUCTION STAGE OF DEVELOPMENT, THE APPLICANT SHALL PREVENT THE CLEANING OF EQUIPMENT OR MATERIAL OR THE STORAGE OR DISPOSAL OF WASTE MATERIAL SUCH AS PAINTS, OILS, SOLVENTS, ASPHALT, CONCRETE, MOTOR OIL OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF A TREE, WITHIN THE DRIP LINE OF ANY PROTECTED TREE OR GROUP OF TREES.
8. NO DAMAGING ATTACHMENT, WIRES, SIGNS OR PERMITS MAY BE FASTENED TO ANY PROTECTED TREE.
9. LARGE PROPERTY AREAS CONTAINING PROTECTED TREES AND SEPARATED FROM CONSTRUCTION OR LAND CLEARING AREAS, ROAD ROW AND UTILITY EASEMENTS MAY BE 'RIBBON OFF', RATHER THAN ERECTING PROTECTIVE FENCING AROUND EACH TREE AS REQUIRED IN NOTE (5) ABOVE. THIS MAY BE ACCOMPLISHED BY PLACING METAL T-POSTS STAKES A MAXIMUM OF 50' APART AND TYING A RIBBON OR ROPE FROM STAKE-TO-STAKE ALONG THE OUTSIDE PERMITTER OF SUCH AREAS BEING CLEARED.
10. ALL EXISTING TREES SHALL BE PRUNED TO THE CITY FORESTER'S MANAGEMENT PRUNE STANDARDS".
11. THE INSTALLATION OF UTILITIES, IRRIGATION LINES OR ANY UNDERGROUND FIXTURE REQUIRING EXCAVATION DEEPER THAN SIX (6) INCHES SHALL BE ACCOMPLISHED BY BORING UNDER THE ROOT SYSTEM OF PROTECTED EXISTING TREES AT A MINIMUM DEPTH OF TWENTY-FOUR (24) INCHES. THE AUGER DISTANCE IS ESTABLISHED FROM THE FACE OF THE TREE (OUTER BARK) AND IS SCALED FROM TREE DIAMETER AT BREAST HEIGHT AS DESCRIBED IN THE CHART BELOW

Tree Diameter at Breast Height (inches)	*Auger Distance From Face of Tree (feet)*
0-2	1
3-4	2
5-9	5
10-14	10
15-19	12
Over 19	15

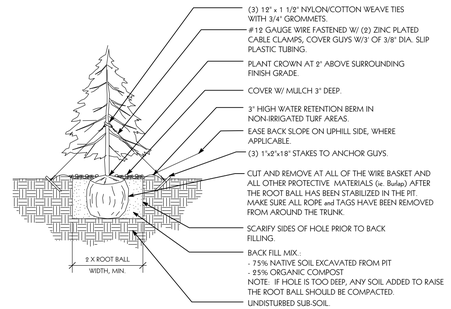
12. TREE PRUNING AND REMOVAL SHALL BE PERFORMED BY A BUSINESS THAT HOLDS A CURRENT CITY OF FORT COLLINS ARBORIST LICENSE WHERE REQUIRED BY CODE.
13. TREE REMOVAL TO BE OUTSIDE SONGBIRD NESTING SEASON (FEB 1 - JULY 31) OR CONDUCT A SURVEY OF TREES ENSURING NO ACTIVE NESTS IN THE AREA.

HILL POND WATER BUDGET CHART 01/20/15

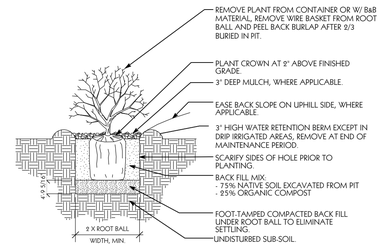
HYDROZONE	AREA (SF)	WATER NEEDED (GALLONS/SF)	ANNUAL WATER USE (GALLONS)
HIGH	25,340	18	414,180
MODERATE	-	10	-
LOW	7,995	3	23,985
VERY LOW	-	0	-
TOTAL	33,335	13.85	438,165



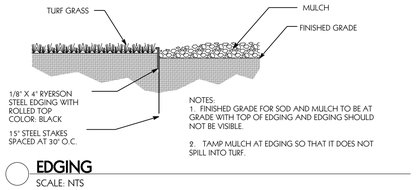
DECIDUOUS TREE PLANTING & STAKING
SCALE: NTS



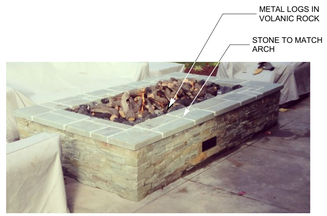
EVERGREEN TREE PLANTING & STAKING
SCALE: NTS



TYPICAL SHRUB PLANTING
SCALE: NTS



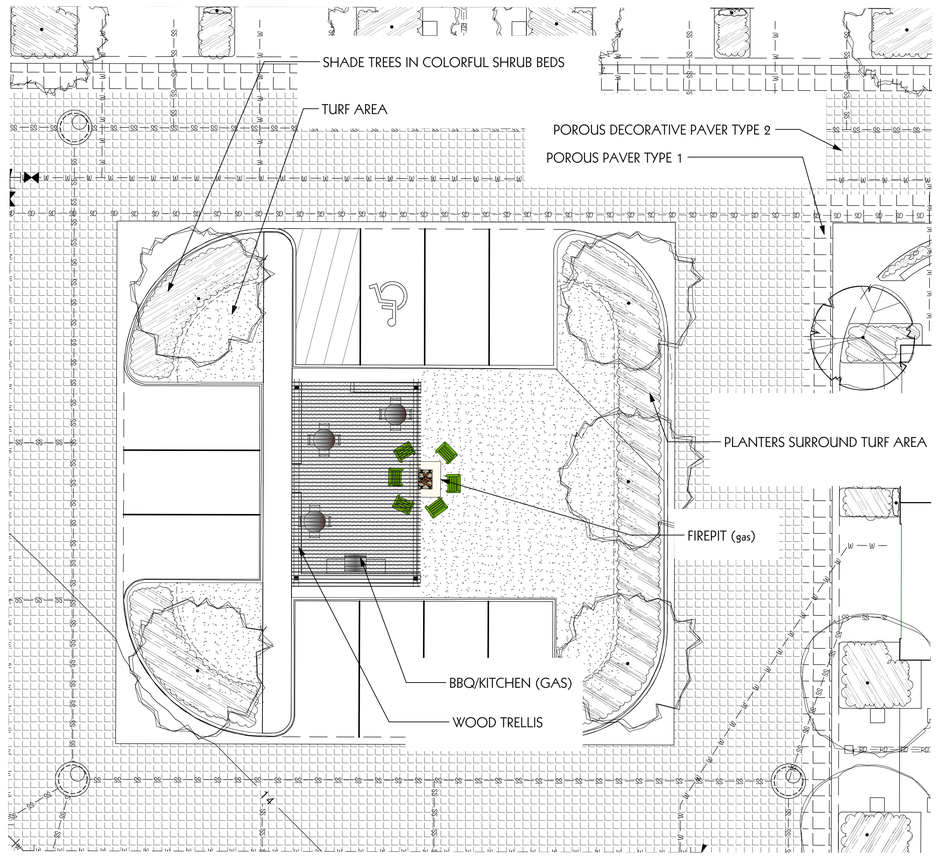
EDGING
SCALE: NTS



GAS FIREPIT
SCALE: NTS

OUTDOOR KITCHEN / GRILL
SCALE: NTS

WOOD TRELLIS
SCALE: NTS



INTERIOR GATHERING AREA
SCALE: 1" = 10'-0"

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Issue Date:

09/17/14 dwn by: osla
rev'd by: osla

Revisions

per staff comments	01/20/2015
per staff comments	2/11/2015

Sheet No.

LANDSCAPE DETAILS

L2.0

TREE PROTECTION NOTES:

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3. AVOID CUTTING SURFACE ROOTS WHENEVER POSSIBLE. SIDEWALKS AND PAVING LEVELS SHOULD BE CONTOURED SUFFICIENTLY TO AVOID DAMAGE.
4. ROOT CUTS FROM EXCAVATION SHOULD BE DONE RAPIDLY. SMOOTH FLUSH CUTS SHOULD BE MADE. BACKFILL BEFORE THE ROOTS HAVE A CHANCE TO DRY OUT AND WATER THE TREE IMMEDIATELY.
5. PRIOR TO CONSTRUCTION , ALL PROTECTED TREES SHALL HAVE ORANGE PROTECTION BARRIER FENCING ERECTED, WHICH AS A MINIMUM ARE SUPPORTED BY 1" X 1" OR SIMILAR STURDY STOCK, FOR SHIELDING OF PROTECTED TREES, NO CLOSER THAN 6' FROM THE TRUNK OR 1/2 OF THE DRIP LINE, WHICH EVER IS GREATER, WITHIN THIS PROTECTION ZONE, THERE SHALL BE NO MOVEMENT OF EQUIPMENT OR STORAGE OF EQUIPMENT, MATERIALS, DEBRIS, FILL OR CUT UNLESS APPROVED BY THE CITY FORESTER.
6. WITHIN THE DRIP LINE OF ANY PROTECTED EXISTING TREE, THERE SHALL BE NO CUT OR FILL OVER A 4" DEPTH UNLESS A QUALIFIED ARBORS OR FORESTER HAS EVALUATED AND APPROVED THE DISTURBANCE.
7. DURING THE CONSTRUCTION STAGE OF DEVELOPMENT, THE APPLICANT SHALL PREVENT THE CLEANING OF EQUIPMENT OR MATERIAL OR THE STORAGE OR DISPOSAL OF WASTE MATERIAL SUCH AS PAINTS, OILS, SOLVENTS, ASPHALT, CONCRETE, MOTOR OIL OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF A TREE, WITHIN THE DRIP LINE OF ANY PROTECTED TREE OR GROUP OF TREES.
8. NO DAMAGING ATTACHMENT, WIRES, SIGNS OR PERMITS MAY BE FASTENED TO ANY PROTECTED TREE.
9. LARGE PROPERTY AREAS CONTAINING PROTECTED TREES AND SEPARATED FROM CONSTRUCTION OR LAND CLEARING AREAS, ROAD ROW AND UTILITY EASEMENTS MAY BE 'RIBBON OFF', RATHER THAN ERECTING PROTECTIVE FENCING AROUND EACH TREE AS REQUIRED IN NOTE (5) ABOVE. THIS MAY BE ACCOMPLISHED BY PLACING METAL T-POSTS STAKES A MAXIMUM OF 50' APART AND TYING A RIBBON OR ROPE FROM STAKE-TO-STAKE ALONG THE OUTSIDE PERMITTER OF SUCH AREAS BEING CLEARED.
10. ALL EXISTING TREES SHALL BE PRUNED TO THE CITY FORESTER'S MANAGEMENT PRUNE STANDARDS".
11. THE INSTALLATION OF UTILITIES, IRRIGATION LINES OR ANY UNDERGROUND FIXTURE REQUIRING EXCAVATION DEEPER THAN SIX (6) INCHES SHALL BE ACCOMPLISHED BY BORING UNDER THE ROOT SYSTEM OF PROTECTED EXISTING TREES AT A MINIMUM DEPTH OF TWENTY-FOUR (24) INCHES. THE AUGER DISTANCE IS ESTABLISHED FROM THE FACE OF THE TREE (OUTER BARK) AND IS SCALED FROM TREE DIAMETER AT BREAST HEIGHT AS DESCRIBED IN THE CHART BELOW

Tree Diameter at Breast Height (inches)	*Auger Distance From Face of Tree (feet)*
0-2	1
3-4	2
5-9	5
10-14	10
15-19	12
Over 19	15

12. TREE PRUNING AND REMOVAL SHALL BE PERFORMED BY A BUSINESS THAT HOLDS A CURRENT CITY OF FORT COLLINS ARBORIST LICENSE WHERE REQUIRED BY CODE.
13. TREE REMOVAL TO BE OUTSIDE SONGBIRD NESTING SEASON (FEB 1 - JULY 31) OR CONDUCT A SURVEY OF TREES ENSURING NO ACTIVE NESTS IN THE AREA.

TREE MITIGATION TABLE 02/13/15

TREE NO:	SPECIES	SIZE	CONDITION	RETAIN	REMOVE	SAVED TREES MITIGATION VALUE	REMOVED TREES MITIGATION VALUE	REMARKS
1	SUGAR MAPLE	7" MULTISTEM	FAIR	X		1.0		
2	GREEN ASH	18"	FAIR		X		2.0	Remove - building location
3	LANCELEAF COTTONWOOD	31"	POOR		X		0.0	REMOVE - trunk failure (FCT)
4	LANCELEAF COTTONWOOD	45"	POOR		X		0.0	REMOVE - root & crown failure (FCT)
5	BLACK LOCUST	7"	FAIR -	X		1.0		
6	LANCELEAF COTTONWOOD	23	FAIR		X		0.0	REMOVE HAZARD - root & crown failure (FCT)
7	LANCELEAF COTTONWOOD	24	FAIR		X		0.0	REMOVE root & crown failure (FCT)
8	LANCELEAF COTTONWOOD	48	DEAD		X		0.0	REMOVE - trunk failure (FTC)
9	LANCELEAF COTTONWOOD	31"	POOR		X		0.0	REMOVE - trunk failure (FTC)
10	AMERICAN PLUM	2"	FAIR		X		0.0	Remove - driveway location
11	LANCELEAF COTTONWOOD	36" - 2 STEM	POOR		X		0.0	REMOVE HAZARD - root, crown, trunk scaffolds failure (FTC)
12	LANCELEAF COTTONWOOD	45"	POOR		X		0.0	REMOVE - trunk, scaffold failure (FTC)
13	LANCELEAF COTTONWOOD	38"	POOR		X		0.0	REMOVE - trunk, scaffold failure (FTC)
14	GREEN ASH	17"	FAIR		X		1.5	Remove - proximity to new foundation
15	BLACK LOCUST	7"	FAIR		X		1.0	Remove - driveway location
16	GREEN ASH	12"	POOR		X		1.0	Remove - building location
17	AMERICAN PLUM	8"	FAIR		X		1.0	Remove - building location
18	BLUE SPRUCE	4"	FAIR +		X		0.0	REMOVED BY PREVIOUS OWNER
19	LANCELEAF COTTONWOOD	47"	FAIR +		X		4.0	Remove - building location
20	LANCELEAF COTTONWOOD	46"	POOR		X		0.0	HAZARD & location w/in new buildings
21	LANCELEAF COTTONWOOD	65"	FAIR		X		4.0	Remove - building location
22	AUSTRIAN PINE	18"	FAIR		X		3.0	Remove - location too close to foundations
23	AUSTRIAN PINE	14"	FAIR		X		2.0	Remove - grading & utilities
24	SIBERIAN ELM	7" MULTISTEM	FAIR		X		0.0	Remove - grading & weed trees
25	SIBERIAN ELM	15"	FAIR		X		0.0	Remove - grading & weed trees
26	SIBERIAN ELM	12"	FAIR		X		0.0	Remove - grading & weed trees
27	SIBERIAN ELM	18"	FAIR		X		0.0	Remove - grading & weed trees
28	ROCKY MOUNTAIN JUNIPER	15" MULTISTEM	FAIR		X		2.0	Remove - building location
29	LANCELEAF COTTONWOOD	42"	FAIR	X		4.0		
30	AUSTRIAN PINE	16"	FAIR -		X		2.0	Remove - building location
31	BLUE SPRUCE	9"	POOR		X		1.0	Remove - building location
32	AUSTRIAN PINE	24"	FAIR		X		2.5	Remove - building location
33	PLAINS COTTONWOOD	36"	FAIR +		X	4.5		Remove - Diseased per FCT
34	HYBRID COTTONWOOD	46"	POOR		X		0.0	Remove - Diseased per FCT
35	HYBRID COTTONWOOD	30"	POOR		X		0.0	Remove - Diseased per FCT
36	BLUE SPRUCE	18"	GOOD	X		3.0		
37	BLUE SPRUCE	21"	GOOD	X		3.5		
38	PLAINS COTTONWOOD	52"	POOR		X		0.0	REMOVE - HAZARD - root, crown, trunk scaffolds failure (FCT)
39	AUSTRIAN PINE	20"	FAIR +	X		3.0		
40	AUSTRIAN PINE	17"	FAIR	X		2.5		
41	AUSTRIAN PINE	24"	FAIR +	X		3.0		LIMB UP BRANCES FOR NEW SIDEWALK
42	WHITE BIRCH	20"	POOR	X		2.0		
43	ASPEN		POOR		X		1.0	Remove - driveway location
44	ASPEN	3	POOR		X		0.0	Remove - driveway location
45	BLUE SPRUCE	20"	GOOD		X		2.5	Remove - building location
46	BLUE SPRUCE	20"	GOOD		X		2.5	Remove - building location
47	ASPEN - CLUSTER OF 8	ALL UNDER 6"	POOR		X		0.0	Remove - driveway location
48	BLUE SPRUCE	12"	FAIR +		X		1.5	Remove - driveway location
49	BLUE SPRUCE	17"	FAIR		X		1.5	Remove - driveway location
50	BLUE SPRUCE	10"	FAIR -		X		1.0	Remove - driveway location
51	BLUE SPRUCE	12"	FAIR		X		1.5	Remove - driveway location
52	BLUE SPRUCE	12"	FAIR		X		1.5	Remove - driveway location
53	BLUE SPRUCE	16"	GOOD		X		2.0	Remove - driveway location
54	BLUE SPRUCE	17"	GOOD -		X		2.0	Remove - driveway location
55	ROCKY MOUNTAIN JUNIPER	10"	FAIR -		X		1.0	Remove - driveway location
56	ROCKY MOUNTAIN JUNIPER	12"	FAIR -		X		1.0	Remove - driveway location
57	BLUE SPRUCE	20"	GOOD -		X		3.5	Remove - driveway location
58	GREEN ASH	27"	FAIR		X		2.5	Remove - building location
59	PONDEROSA PINE	18"	FAIR		X		1.5	Remove - grading & sidewalk
60	BLACK LOCUST	2 STEMS - 9"	FAIR		X		1.0	Remove - grading & sidewalk
61	AUSTRIAN PINE	13"	FAIR		X		1.5	Remove - building location
62	AUSTRIAN PINE	17"	FAIR		X		2.5	Remove - building location
63	UPRIGHT JUNIPER	5"	FAIR -		X		0.0	Remove - building location
64	UPRIGHT JUNIPER	5"	FAIR -		X		0.0	Remove - building location
65	UPRIGHT JUNIPER	6"	FAIR -		X		0.0	Remove - building location
66	UPRIGHT JUNIPER	6"	FAIR -		X		0.0	Remove - building location
67	ROCKY MOUNTAIN JUNIPER	11"	POOR		X		1.0	Remove - grading & sidewalk
68	ROCKY MOUNTAIN JUNIPER	10"	POOR		X		1.0	Remove - building location
69	ROCKY MOUNTAIN JUNIPER	7"	POOR		X		1.0	Remove - building location
70	ROCKY MOUNTAIN JUNIPER	8"	POOR		X		1.0	Remove - building location
71	ROCKY MOUNTAIN JUNIPER	8"	POOR		X		1.0	Remove - building location
72	ROCKY MOUNTAIN JUNIPER	9"	POOR		X		1.0	Remove - building location
			TOTAL TO BE RETAINED			27.5	64.5	MITIGATION VALUE TO BE REPLACED.

Catamount PROPERTIES LTD

outside la
landscape architecture + urban design + planning

boulder / steamboat springs, co
p. 303.517.9256
f. 970.367.5180
osla@me.com

HILL POND RESIDENCES
910 Hill Pond Road
Fort Collins, Colorado

NOTICE DUTY OF COOPERATION

Release of these plans contemplates further cooperation among the owner, his contractor, and the landscape architect. Design and construction are complex. Although the landscape architect and their consultants have performed their services with due care and diligence, they cannot guarantee perfection. Communication is imperfect, and every contingency cannot be anticipated. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to the architect. Failure to notify the landscape architect compounds misunderstanding and increases construction costs. A failure to cooperate by a simple notice to the landscape architect shall relieve the landscape architect from responsibility for all consequences. Changes made from the plans without consent of the landscape architect are unauthorized, and shall relieve the landscape architect of responsibility for all consequences arriving out of such changes.

Issue Date:

09/17/14 dwn by: osla

rev'd by: osla

Revisions

	REVISED PER ARBORIST INSPECTION 01/20/2015
	per staff comments 02/13/2015

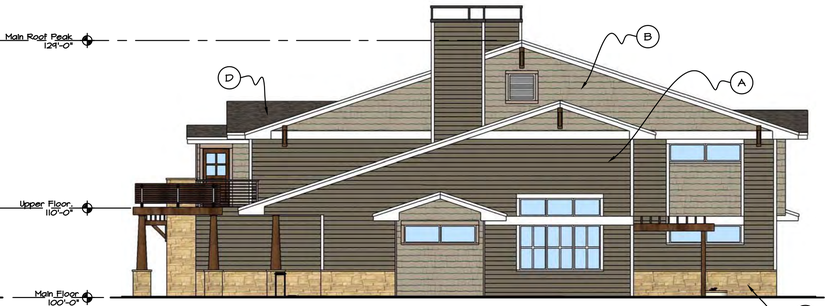
Sheet No.

TREE MITIGATION PLAN

L0.0

1 CONCEPTUAL STREET VIEW
NO SCALE

2 BUILDING TYPE 1 - Front Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 1: Duplex with Unit A and Unit B



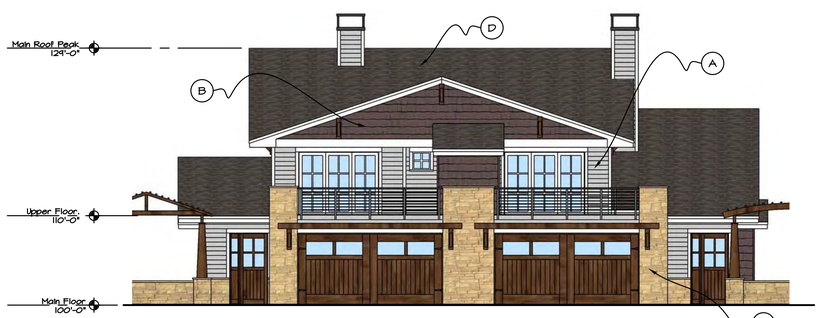
3 BUILDING TYPE 1 - Right Side Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 1: Duplex with Unit A and Unit B

4 BUILDING TYPE 1 - Rear Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 1: Duplex with Unit A and Unit B

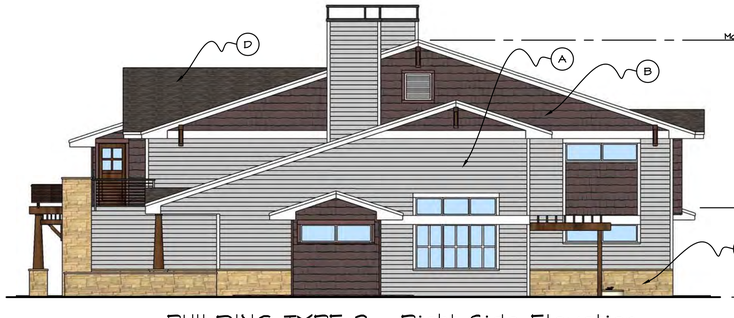
5 BUILDING TYPE 1 - Left Side Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 2: Duplex with Unit A and Unit B

MATERIALS NOTES

(A) Fiber Cement Board Lap Siding (Building Type 1: warm gray, medium) (Building Type 2: cool gray, light) (Building Type 3: warm gray, medium) (Building Type 4: light yellow)	(B) Fiber Cement Board Shake Siding (Building Type 1: warm gray, light) (Building Type 2: reddish brown) (Building Type 3: warm gray, light) (Building Type 4: reddish brown)
(C) Synthetic Stone Veneer (All Building Types: medium tan)	(D) Asphalt Shingles (All Building Types: warm gray, dark)



6 BUILDING TYPE 2 - Front Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 1: Duplex with Unit A and Unit B



7 BUILDING TYPE 2 - Right Side Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 2: Duplex with Unit A and Unit B

8 BUILDING TYPE 2 - Rear Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 2: Duplex with Unit A and Unit B

9 BUILDING TYPE 2 - Left Side Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 2: Duplex with Unit A and Unit B

BUILDING ELEVATIONS

john dengler & ASSOCIATES, P.C. ARCHITECTS & PLANNERS
5336 highcastle court fort collins, colorado 80525 (970) 223-1512

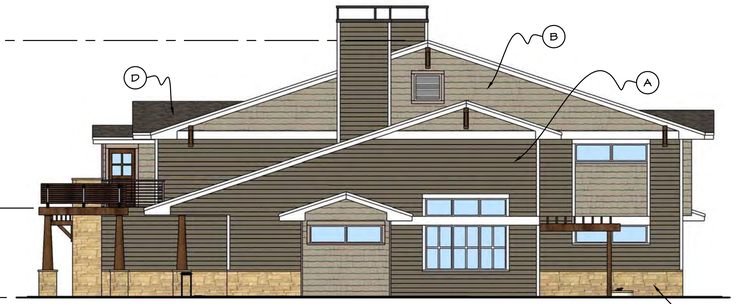
Hill Pond Residences

910 Hill Pond Road
Fort Collins, Colorado

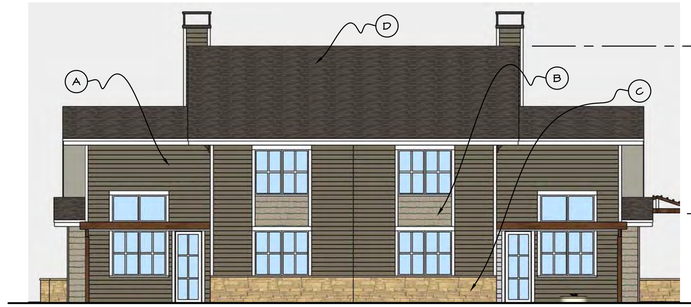
by: jhd
date: 2.11.2015
revisions:

sheet: 1 of 2

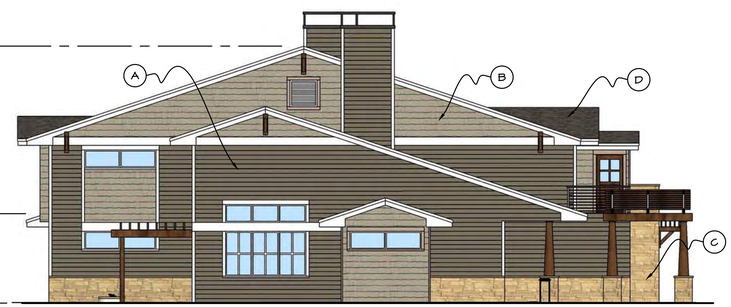
1 BUILDING TYPE 3 - Front Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 3: Duplex with Unit B and Unit B



3 BUILDING TYPE 3 - Right Side Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 3: Duplex with Unit B and Unit B

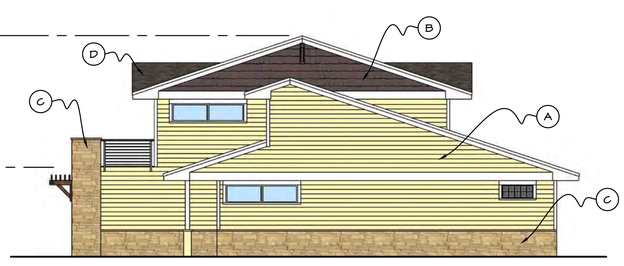


4 BUILDING TYPE 3 - Rear Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 3: Duplex with Unit B and Unit B



5 BUILDING TYPE 3 - Left Side Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 3: Duplex with Unit B and Unit B

1 BUILDING TYPE 4 - Front Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 4: Single Unit C



3 BUILDING TYPE 4 - Right Side Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 4: Single Unit C

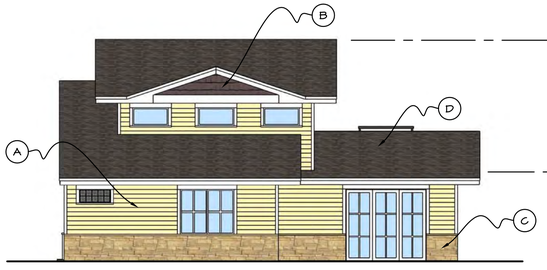
MATERIALS NOTES

(A) Fiber Cement Board Lap Siding
(Building Type 1: warm gray, medium)
(Building Type 2: cool gray, light)
(Building Type 3: warm gray, medium)
(Building Type 4: light yellow)

(B) Fiber Cement Board Shake Siding
(Building Type 1: warm gray, light)
(Building Type 2: reddish brown)
(Building Type 3: warm gray, light)
(Building Type 4: reddish brown)

(C) Synthetic Stone Veneer
(All Building Types: medium tan)

(D) Asphalt Shingles
(All Building Types: warm gray, dark)



4 BUILDING TYPE 4 - Rear Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 4: Single Unit C

5 BUILDING TYPE 4 - Left Side Elevation
SCALE: 1/8" = 1'-0"
BUILDING TYPE 4: Single Unit C

BUILDING ELEVATIONS

john dengler & ASSOCIATES, P.C. ARCHITECTS & PLANNERS
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Hill Pond Residences

910 Hill Pond Road
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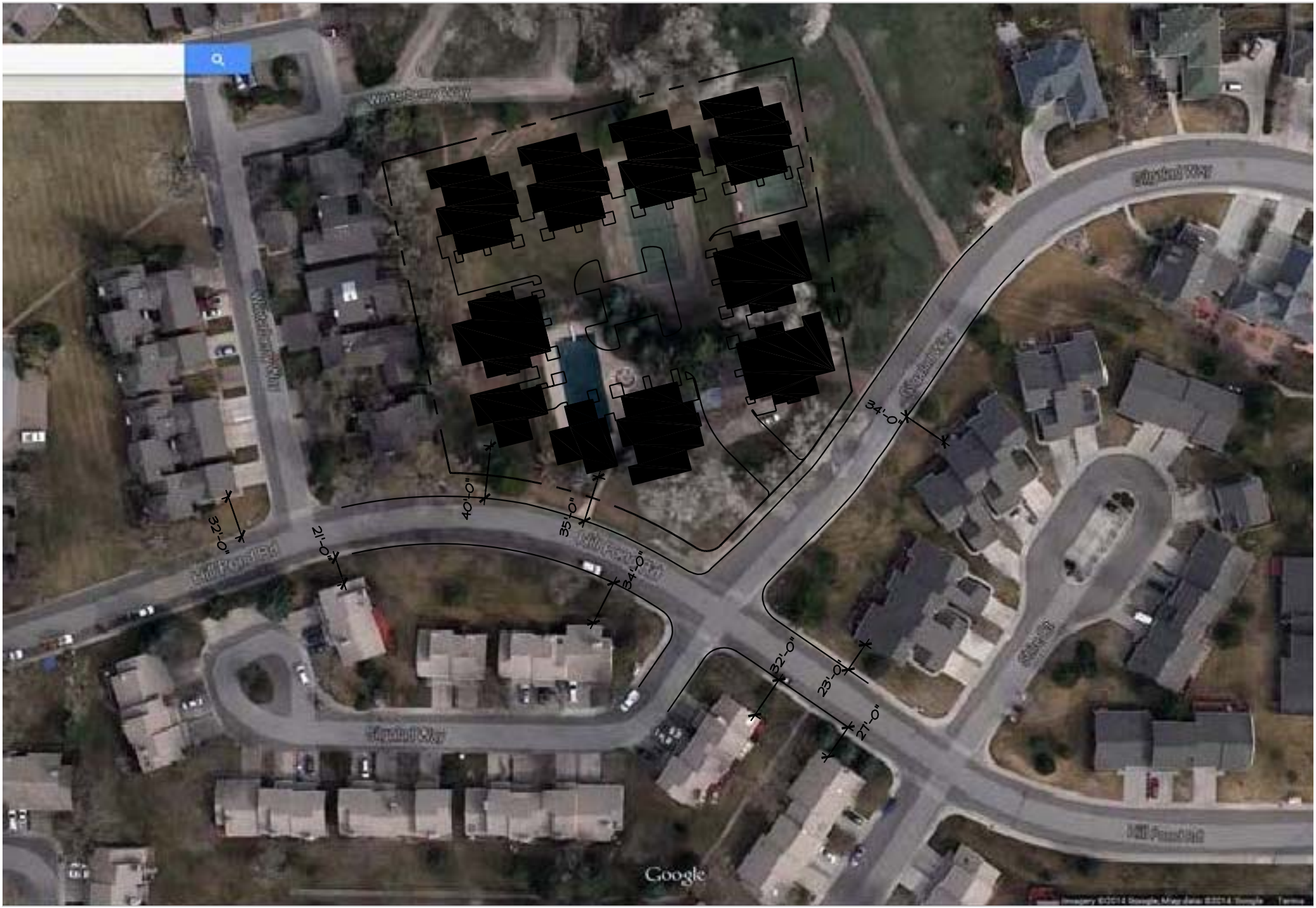
sheet 2 of 2



NORTH

1 Architectural Addendum 1

NO SCALE

Aerial view of proposed Hill Pond Properties project to demonstrate contextual street setbacks

john dengler & ASSOCIATES, P.C. ARCHITECTS & PLANNERS

HILL POND RESIDENCES

A TRACT OF LAND LOCATED IN THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 7 NORTH, RANGE 69 WEST OF THE 6TH P.M., LARIMER COUNTY, AND A REPLAT OF A PORTION OF TRACT "H", THIRD REPLAT OF HILL POND ON SPRING CREEK, FIRST FILING, CITY OF FORT COLLINS, STATE OF COLORADO

STATEMENT OF OWNERSHIP AND SUBDIVISION:

Know all persons by these presents, that the undersigned owner(s) of the following described land:

A tract of land located in the Northwest Quarter of Section 23, Township 7 North, Range 69 West of the 6th P.M., Larimer County, and a replat of a portion of Tract "H", Third Replat of Hill Pond on Spring Creek, First Filing, City of Fort Collins, State of Colorado, being more particularly described as follows:

BEGINNING at the Southwest corner of Tract "H", Third Replat of Hill Pond on Spring Creek, First Filing; thence along the westerly line of said Tract "H", North 12° 20' 00" West, 243.78 feet; thence, North 75° 45' 17" East, 325.05 feet; thence, South 10° 02' 03" East, 259.67 feet to the northerly right-of-way line of Gilgalad Way; thence along said line the following 4 courses and distances: South 34° 27' 15" West, 47.72 feet; thence along a curve concave to the northwest having a central angle of 09° 59' 56" with a radius of 156.00 feet, an arc length of 27.22 feet and the chord of which bears South 39° 27' 15" West, 27.19 feet; thence, South 44° 27' 14" West, 80.64 feet; thence along a curve concave to the north having a central angle of 78° 19' 19" with a radius of 15.00 feet, an arc length of 20.50 feet and the chord of which bears South 83° 36' 55" West, 18.95 feet to the northerly right-of-way line of Hill Pond Road; thence along said line and along a curve concave to the southwest having a central angle of 31° 36' 36" with a radius of 362.08 feet, an arc length of 199.76 feet and the chord of which bears North 73° 01' 44" West, 197.24 feet to the Point of Beginning.

Contains 94,917 square feet or 2.179 acres, more or less.

For themselves and their successors in interest (collectively "Owner") have caused the above described land to be surveyed and subdivided into lots, tracts and streets as shown on this Plat to be known as HILL POND RESIDENCES (the "Development"), subject to all easements and rights-of-way now of record or existing or indicated on this Plat. The rights and obligations of this Plat shall run with the land.

CERTIFICATE OF DEDICATION:

The Owner does hereby dedicate and convey to the City of Fort Collins, Colorado (hereafter "City"), for public use, forever, a permanent right-of-way for street purposes and the "Easements" as laid out and designated on this Plat; provided, however, that (1) acceptance by the City of this dedication of Easements does not impose upon the City a duty to maintain the Easements so dedicated, and (2) acceptance by the City of this dedication of streets does not impose upon the City a duty to maintain streets so dedicated until such time as the provisions of the Maintenance Guarantee have been fully satisfied. The streets dedicated on this Plat are the fee property of the City as provided in Section 31-23-107 C.R.S. The City's rights under the Easements include the right to install, operate, access, maintain, repair, reconstruct, remove and replace within the Easements public improvements consistent with the intended purpose of the Easements; the right to install, maintain and use gates in any fences that cross the Easements; the right to mark the location of the Easements with suitable markers; and the right to permit other public utilities to exercise these same rights. Owner reserves the right to use the Easements for purposes that do not interfere with the full enjoyment of the rights hereby granted. The City is responsible for maintenance of its own improvements and for repairing any damage caused by its activities in the Easements, but by acceptance of this dedication, the City does not accept the duty of maintenance of the Easements, or of improvements in the Easements that are not owned by the City. Owner will maintain the surface of the Easements in a sanitary condition in compliance with any applicable weed, nuisance or other legal requirements.

Except as expressly permitted in an approved plan of development or other written agreement with the City, Owner will not install on the Easements, or permit the installation on the Easements, of any building, structure, improvement, fence, retaining wall, sidewalk, tree or other landscaping (other than usual and customary grasses and other ground cover). In the event such obstacles are installed in the Easements, the City has the right to require the Owner to remove such obstacles from the Easements. If Owner does not remove such obstacles, the City may remove such obstacles without any liability or obligation for repair and replacement thereof, and charge the Owner the City's costs for such removal. If the City chooses not to remove the obstacles, the City will not be liable for any damage to the obstacles or any other property to which they are attached.

The rights granted to the City by this Plat inure to the benefit of the City's agents, licensees, permittees and assigns.

OWNER:

BY:_____
Name:_____
Title:_____

STATE OF COLORADO)
)SS
COUNTY OF LARIMER)

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by _____, as _____ of _____.

Witness my hand and official seal

My commission expires: _____

_____
Notary Public

LIENHOLDER:

BY:_____
Name:_____
Title:_____

STATE OF COLORADO)
)SS
COUNTY OF LARIMER)

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by _____, as _____ of _____.

Witness my hand and official seal

My commission expires: _____

_____
Notary Public

MAINTENANCE GUARANTEE:

The Owner hereby warrants and guarantees to the City, for a period of two (2) years from the date of completion and first acceptance by the City of the improvements warranted hereunder, the full and complete maintenance and repair of the improvements to be constructed in connection with the Development which is the subject of this Plat. This warranty and guarantee is made in accordance with the City Land Use Code and/or the Transitional Land Use Regulations, as applicable. This guarantee applies to the streets and all other appurtenant structures and amenities lying within the rights-of-way, Easements and other public properties, including, without limitation, all curbing, sidewalks, bike paths, drainage pipes, culverts, catch basins, drainage ditches and landscaping. Any maintenance and/or repair required on utilities shall be coordinated with the owning utility company or department.

The Owner shall maintain said improvements in a manner that will assure compliance on a consistent basis with all construction standards, safety requirements and environmental protection requirements of the City. The Owner shall also correct and repair, or cause to be corrected and repaired, all damages to said improvements resulting from development-related or building-related activities. In the event the Owner fails to correct any damages within thirty (30) days after written notice thereof, then said damages may be corrected by the City and all costs and charges billed to and paid by the Owner. The City shall also have any other remedies available to it as authorized by law. Any damages which occurred prior to the end of said two (2) year period and which are unrepaired at the termination of said period shall remain the responsibility of the Owner.

NOTICE OF OTHER DOCUMENTS:

All persons take notice that the Owner has executed certain documents pertaining to this Development which create certain rights and obligations of the Development, the Owner and/or subsequent Owners of all or portions of the Development site, many of which obligations constitute promises and covenants that, along with the obligations under this Plat, run with the land. The said documents may also be amended from time to time and may include, without limitation, the Development Agreement, Site And Landscape Covenants, Final Site Plan, Final Landscape Plan, and Architectural Elevations, which documents are on file in the office of the clerk of the City and should be closely examined by all persons interested in purchasing any portion of the Development site.

REPAIR GUARANTEE:

In consideration of the approval of this final Plat and other valuable consideration, the Owner does hereby agree to hold the City harmless for a five (5) year period, commencing upon the date of completion and first acceptance by the City of the improvements to be constructed in connection with the development which is the subject of this Plat, from any and all claims, damages, or demands arising on account of the design and construction of public improvements of the property shown herein; and the Owner furthermore commits to make necessary repairs to said public improvements, to include, without limitation, the roads, streets, fills, embankments, ditches, cross pans, sub-drains, culverts, walls and bridges within the right-of-way, Easements and other public properties, resulting from failures caused by design and/or construction defects. This agreement to hold the City harmless includes defects in materials and workmanship, as well as defects caused by or consisting of settling trenches, fills or excavations.

Further, the Owner warrants that he/she owns fee simple title to the property shown hereon and agrees that the City shall not be liable to the Owner or his/her successors in interest during the warranty period, for any claim of damages resulting from negligence in exercising engineering techniques and due caution in the construction of cross drains, drives, structures or buildings, the changing of courses of streams and rivers, flooding from natural creeks and rivers, and any other matter whatsoever on private property. Any and all monetary liability occurring under this paragraph shall be the liability of the Owner. I further warrant that I have the right to convey said land according to this Plat.

ATTORNEY'S CERTIFICATION

I hereby certify that this Subdivision Plat has been duly executed as required pursuant to Section 2.2.3(C)(3)(a) through (e) inclusive of the Land Use Code of the City of Fort Collins and that all persons signing this Subdivision Plat on behalf of a corporation or other entity are duly authorized signatories under the laws of the State of Colorado. This Certification is based upon the records of the Clerk and Recorder of Larimer County, Colorado as of the date of execution of the Plat and other information discovered by me through reasonable inquiry and is limited as authorized by Section 2.2.3(C)(3)(f) of the Land Use Code.

Attorney:_____

Address: _____
_____

Registration No.:_____

APPROVED AS TO FORM, CITY ENGINEER

By the City Engineer of the City of Fort Collins, Colorado this _____day of _____ A.D., 20____.

_____
City Engineer

PLANNING APPROVAL

By the Director of Community Development and Neighborhood Services of the City of Fort Collins, Colorado this _____ day of _____ A.D., 20_____.

_____
Director

SURVEYOR'S STATEMENT

I, Gerald D. Gilliland, a Colorado Registered Professional Land Surveyor do hereby state that this Subdivision Plat was prepared from an actual survey under my personal supervision, that the monumentation as indicated hereon were found or set as shown, and that the foregoing plat is an accurate representation thereof, all this to the best of my knowledge, information and belief.

_____

Gerald D. Gilliland
Colorado Registered Professional
Land Surveyor No. 14823

NOTES:

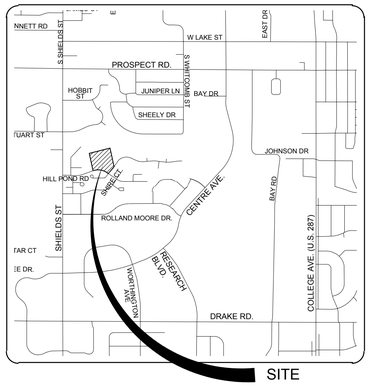
1) The Basis of Bearings is the Westerly line of Tract "H", Third Replat of Hill Pond on Spring Creek, First Filing as bearing South 12° 20' 00" East as monumented on drawing (assumed bearing).

2) The lineal unit of measurement for this plat is U.S. Survey Feet.

3) All information regarding easements, right-of-way or title of record, Northern Engineering relied upon Order Number _____, dated _____ prepared by _____.

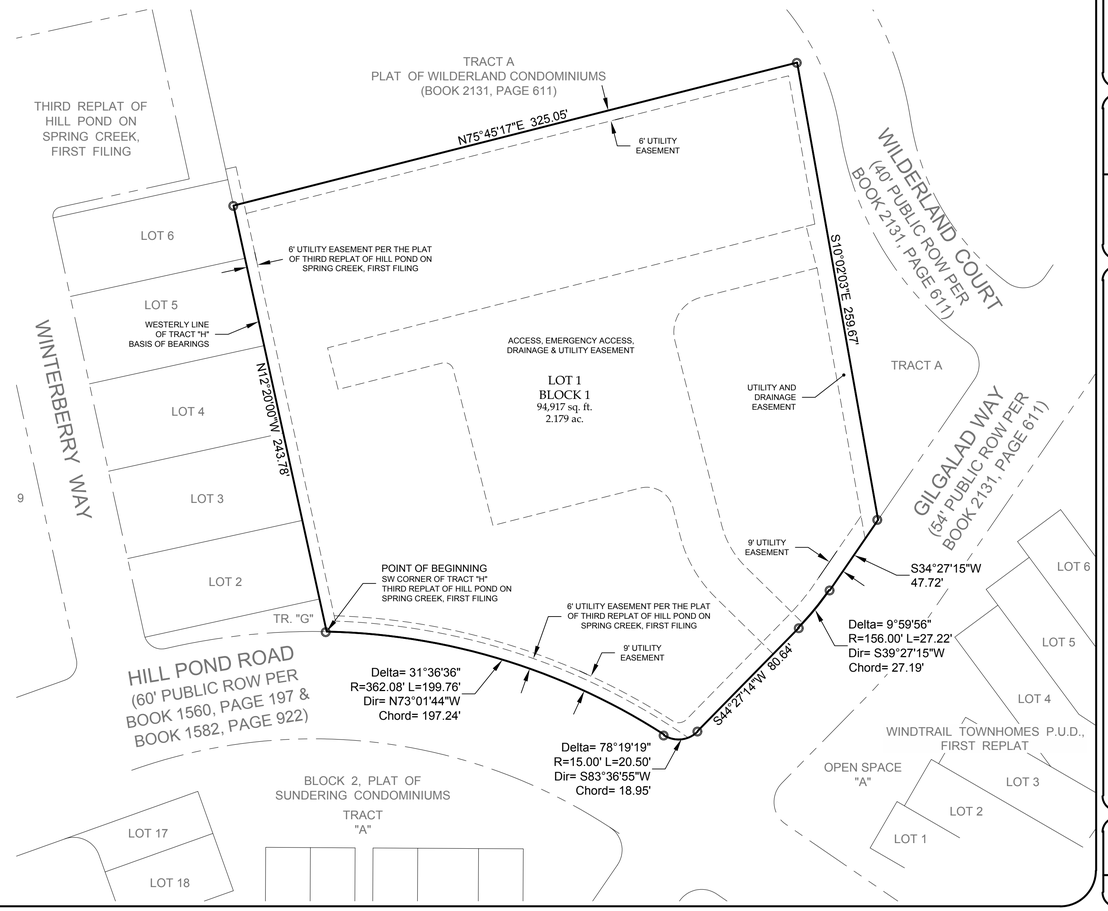
NOTICE

ALL RESPONSIBILITIES AND COSTS OF OPERATION, MAINTENANCE AND RECONSTRUCTION OF THE PRIVATE STREETS AND/OR DRIVES LOCATED ON THE PRIVATE PROPERTY THAT IS THE SUBJECT OF THIS PLAT SHALL BE BORNE BY THE OWNERS OF SAID PROPERTY, EITHER INDIVIDUALLY, OR COLLECTIVELY, THROUGH A PROPERTY OWNERS' ASSOCIATION, IF APPLICABLE. THE CITY OF FORT COLLINS SHALL HAVE NO OBLIGATION OF OPERATION, MAINTENANCE OR RECONSTRUCTION OF SUCH PRIVATE STREETS AND/OR DRIVES NOR SHALL THE CITY HAVE ANY OBLIGATION TO ACCEPT SUCH STREETS AND/OR DRIVES AS PUBLIC STREETS OR DRIVES.



NORTH

VICINITY MAP
1"=1500'



LEGEND

- EASEMENT LINE
- CENTERLINE
- BOUNDARY LINE
- RIGHT-OF-WAY
- LOT LINE
- FOUND CORNER AS DESCRIBED
- SET #4 REBAR w/1" PLASTIC CAP LS 14823

NORTH

40 0 40 80 120 Feet
(IN FEET)
1 inch = 40 ft.
(US SURVEY FEET)

NOTICE:
According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years after the date of the certificate shown hereon.

SECTION: 23
TOWNSHIP: 7 N
RANGE: 69 W of the 6th PM

NORTHERN ENGINEERING
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521
PHONE: 970.221.4158 FAX: 970.221.4159
www.northernengineering.com

PROJECT: 620-004
DESIGNED BY:
DRAWN BY: L. Smith
DATE: 1/21/15
SCALE: N.A.
REVIEWED BY: G. Gilliland

HILL POND RESIDENCES
CITY OF FORT COLLINS
STATE OF COLORADO

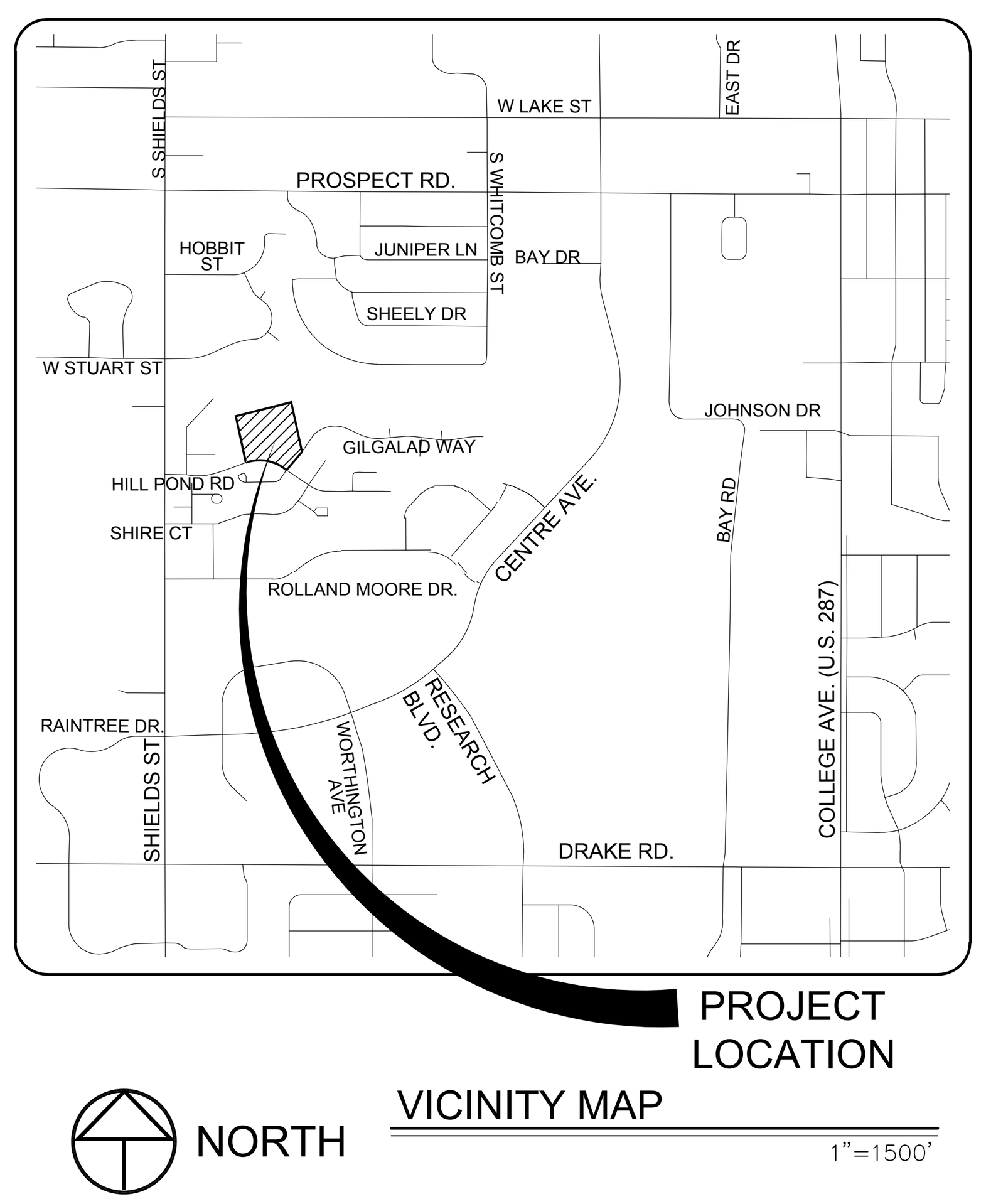
Sheet 1
Of 1 Sheet

UTILITY PLANS FOR

HILL POND RESIDENCES

A TRACT OF LAND LOCATED IN THE NORTHWEST QUARTER OF SECTION 23, TOWNSHIP 7 NORTH, RANGE 69 WEST OF THE 6TH P.M., LARIMER COUNTY, AND A REPLAT OF A PORTION OF TRACT "H", THIRD REPLAT OF HILL POND ON SPRING CREEK, FIRST FILING, CITY OF FORT COLLINS, STATE OF COLORADO

FEBRUARY 2015



VICINITY MAP
1"=1500'

PROJECT BENCHMARKS:

PROJECT DATUM: NGVD 29 UNADJUSTED (OLD CITY OF FORT COLLINS DATUM)

BENCHMARK #1:
City of Fort Collins Benchmark 01-93
Elevation = 5023.27

BENCHMARK #2:
City of Fort Collins Benchmark 29-92
Elevation = 5022.50

NOTE: IF NAVD 88 DATUM IS REQUIRED FOR ANY PURPOSE, THE FOLLOWING EQUATION SHOULD BE USED: NAVD88 = NGVD29 UNADJUSTED + 3.17'

Basis of Bearing
Easterly line of Tract "H", Third Replat of Hill Pond on Spring Creek, First Filing as bearing South 12° 20' 00" East (assumed bearing).

ORIGINAL FIELD SURVEY BY:

Intermill Land Surveying, Inc.
Project No. P-13-7461
Date: October 28, 2013

DISCLAIMER STATEMENT:

These plans have been reviewed by the City of Fort Collins for concept only. The review does not imply responsibility by the reviewing department, the City of Fort Collins Engineer, or the City of Fort Collins for accuracy and correctness of the calculations. Furthermore, the review does not imply that quantities of items on the plans are the final quantities required. The review shall not be construed for any reason as acceptance of financial responsibility by the City of Fort Collins for additional quantities of items shown that may be required during the construction phase.

CERTIFICATION STATEMENT:

I hereby affirm that these final construction plans were prepared under my direct supervision, in accordance with all applicable City of Fort Collins and State of Colorado standards and statutes, respectively; and that I am fully responsible for the accuracy of all design. revisions, and record conditions that I have noted on these plans.

CONTACT INFORMATION

PROJECT TEAM:

OWNER/APPLICANT
Catamount Properties Ltd.
Chuck Bailey
7302 Rozena Street
Longmont, Colorado 80503
(303) 884-1021

ARCHITECT
John Dengler & Associates, P.C
Jonathan Day
5336 Highcastle Court
Fort Collins, CO 80525
(970) 223-1512

LANDSCAPE ARCHITECT
Outside LA, LLC
Sandi Gibson
2623 Burgess Creek Road
Steamboat Springs, Colorado 80487
(970) 871-9629

SITE ENGINEER
Northern Engineering Services, Inc.
Nick Haws, PE, LEED AP
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521
(970) 221-4158

SURVEYOR
Intermill Land Surveying, Inc.
Robert George Persichitte PLS
1301 Cleveland Avenue
Loveland, Colorado 80537
(970) 669-0516

GEOTECH
CLT | Thompson, Inc.
David M. Nasuatka, PE
351 Linden Street, Suite 140
Fort Collins, Colorado 80524
(970) 206-9455

UTILITY CONTACT LIST: *

UTILITY COMPANY			PHONE NUMBER
GAS	Xcel Energy	Stephanie Rich	(970) 225-7857
ELECTRIC	City of Fort Collins Light & Power	Justin Fields	(970) 224-6150
CABLE	Comcast	Don Kapperman	(970) 567-0425
TELECOM.	CenturyLink	William Johnson	(970) 377-6401
WATER	City of Fort Collins Utilities	Shane Boyle	(970) 221-6339
WASTEWATER	City of Fort Collins Utilities	Shane Boyle	(970) 221-6339
STORMWATER	City of Fort Collins Utilities	Glen Schlueter	(970) 221-6700

* This list is provided as a courtesy reference only. Northern Engineering Services assumes no responsibility for the accuracy or completeness of this list. In no way shall this list relinquish the Contractor's responsibility for locating all utilities prior to commencing any construction activity. Please contact the Utility Notification Center of Colorado (UNCC) at 811 for additional information.

SHEET INDEX

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED:	City Engineer	Date
CHECKED BY:	Water & Wastewater Utility	Date
CHECKED BY:	Stormwater Utility	Date
CHECKED BY:	Parks & Recreation	Date
CHECKED BY:	Traffic Engineer	Date
CHECKED BY:	Environmental Planner	Date

No. Revisions: By: Date:
REVIEW SET
NOT FOR CONSTRUCTION
02/11/15

These drawings are instruments of service provided by Northern Engineering Services, Inc. and are not to be used for any type of construction unless signed and sealed by a Professional Engineer in the employ of Northern Engineering Services, Inc.

NORTHERN ENGINEERING
PHONE: 970.221.4158
www.northernengineering.com
301 North Howes Street, Suite 010
Fort Collins, Colorado 80521

DATE: February 11, 2015	SCALE: N/A	REVIEWED BY: N. Haws
PROJECT: 620-004	DESIGNED BY: A. Reese	DRAWN BY: B. Ruch

HILL POND RESIDENCES
COVER SHEET

Sheet
CS1
Of 15 Sheets

A. GENERAL NOTES

1. All materials, workmanship, and construction of public improvements shall meet or exceed the standards and specifications set forth in the Larimer County Urban Area Street Standards and applicable state and federal regulations. Where there is conflict between these plans and the specifications, or any applicable standards, the most restrictive standard shall apply. All work shall be inspected and approved by the City of Fort Collins.

2. All references to any published standards shall refer to the latest revision of said standard, unless specifically stated otherwise.

3. These public improvement construction plans shall be valid for a period of three years from the date of approval by the City of Fort Collins Engineer. Use of these plans after the expiration date will require a new review and approval process by the City of Fort Collins prior to commencement of any work shown in these plans.

4. The engineer who has prepared these plans, by execution and/or seal hereof, does hereby affirm responsibility to the City of Fort Collins, as beneficiary of said engineer's work, for any errors and omissions contained in these plans, and approval of these plans by the City of Fort Collins Engineer shall not relieve the engineer who has prepared these plans of all such responsibility. Further, to the extent permitted by law, the engineer hereby agrees to hold harmless and indemnify the City of Fort Collins, and its officers and employees, from and against all liabilities, claims, and demands which may arise from any errors and omissions contained in these plans.

5. All storm sewer construction, as well as power and other "dry" utility installations, shall conform to the City of Fort Collins standards and specifications current at the date of approval of the plans by the City of Fort Collins Engineer.

6. The type, size, location and number of all known underground utilities are approximate when shown on the drawings. It shall be the responsibility of the Developer to verify the existence and location of all underground utilities along the route of the work before commencing new construction. The Developer shall be responsible for unknown underground utilities.

7. The Developer shall contact the Utility Notification Center of Colorado (UNCC) at 1-800-922-1987, at least 2 working days prior to beginning excavation or grading, to have all registered utility locations marked. Other unregistered utility entities (i.e. ditch / irrigation company) are to be located by contacting the respective representative. Utility service laterals are also to be located prior to beginning excavation or grading. It shall be the responsibility of the Developer to relocate all existing utilities that conflict with the proposed improvements shown on these plans.

8. The Developer shall be responsible for protecting all utilities during construction and for coordinating with the appropriate utility company for any utility crossings required.

9. If a conflict exists between existing and proposed utilities and/or a design modification is required, the Developer shall coordinate with the engineer to modify the design. Design modification(s) must be approved by the City of Fort Collins prior to beginning construction.

10. The Developer shall coordinate and cooperate with the City of Fort Collins, and all utility companies involved, to assure that the work is accomplished in a timely fashion and with a minimum disruption of service. The Developer shall be responsible for contacting, in advance, all parties affected by any disruption of any utility service as well as the utility companies.

11. No work may commence within any public storm water, sanitary sewer or potable water system until the Developer notifies the utility provider. Notification shall be a minimum of 2 working days prior to commencement of any work. At the discretion of the water utility provider, a pre-construction meeting may be required prior to commencement of any work.

12. The Developer shall sequence installation of utilities in such a manner as to minimize potential utility conflicts. In general, storm sewer and sanitary sewer should be constructed prior to installation of the water lines and dry utilities.

13. The minimum cover over water lines is 4.5 feet and the maximum cover is 5.5 feet unless otherwise noted in the plans and approved by the Water Utility.

14. A State Construction Dewatering Wastewater Discharge Permit is required if dewatering is required in order to install utilities or if water is discharged into a storm sewer, channel, irrigation ditch or any waters of the United States.

15. The Developer shall comply with all terms and conditions of the Colorado Permit for Storm Water Discharge (Contact Colorado Department of Health, Water Quality Control Division, (303) 692-3590), the Storm Water Management Plan, and the Erosion Control Plan.

16. The City of Fort Collins shall not be responsible for the maintenance of storm drainage facilities located on private property. Maintenance of onsite drainage facilities shall be the responsibility of the property owner(s).

17. Prior to final inspection and acceptance by the City of Fort Collins, certification of the drainage facilities, by a registered engineer, must be submitted to and approved by the Stormwater Utility Department. Certification shall be submitted to the Stormwater Utility Department at least two weeks prior to the release of a certificate of occupancy for single family units. For commercial properties, certification shall be submitted to the Stormwater Utility Department at least two weeks prior to the release of any building permits in excess of those allowed prior to certification per the Development Agreement.

18. The City of Fort Collins shall not be responsible for any damages or injuries sustained in this Development as a result of groundwater seepage, whether resulting from groundwater flooding, structural damage or other damage unless such damage or injuries are sustained as a result of the City of Fort Collins failure to properly maintain its water, wastewater, and/or storm drainage facilities in the development.

19. All recommendations of the "Preliminary Drainage Report for Hill Pond Residences" dated January 21, 2015 by Northern Engineering shall be followed and implemented.

20. Temporary erosion control during construction shall be provided as shown on the Erosion Control Plan. All erosion control measures shall be maintained in good repair by the Developer, until such time as the entire disturbed areas is stabilized with hard surface or landscaping.

21. The Developer shall be responsible for insuring that no mud or debris shall be tracked onto the existing public street system. Mud and debris must be removed within 24 hours by an appropriate mechanical method (i.e. machine broom sweep, light duty front-end loader, etc.) or as approved by the the City of Fort Collins street inspector.

22. No work may commence within any improved or unimproved public Right-of-Way until a Right-of-Way Permit or Development Construction Permit is obtained, if applicable.

23. The Developer shall be responsible for obtaining all necessary permits for all applicable agencies prior to commencement of construction. The Developer shall notify the the City of Fort Collins Inspector (Fort Collins - 221-6605) and the City of Fort Collins Erosion Control Inspector (Fort Collins - 221-6700) at least 2 working days prior to the start of any earth disturbing activity, or construction on any and all public improvements. If the City of Fort Collins Engineer is not available after proper notice of construction activity has been provided, the Developer may commence work in the Engineer absence. However, the City of Fort Collins reserves the right not to accept the improvement if subsequent testing reveals an improper installation.

24. The Developer shall be responsible for obtaining soils tests within the Public Right-of-Way after right of way grading and all utility trench work is complete and prior to the placement of curb, gutter, sidewalk and pavement. If the final soils/pavement design report does not correspond with the results of the original geotechnical report, the Developer shall be responsible for a re-design of the subject pavement section or, the Developer may use the City of Fort Collins' default pavement thickness section(s). Regardless of the option used, all final soils/pavement design reports shall be prepared by a licensed Professional Engineer. The final report shall be submitted to the Inspector a minimum of 10 working days prior to placement of base and asphalt. Placement of curb, gutter, sidewalk, base and asphalt shall not occur until the City of Fort Collins Engineer approves the final report.

25. The contractor shall hire a licensed engineer or land surveyor to survey the constructed elevations of the street subgrade and the gutter flowline at all intersections, inlets, and other locations requested by the the City of Fort Collins inspector. The engineer or surveyor must certify in a letter to the City of Fort Collins that these elevations conform to the approved plans and specifications. Any deviations shall be noted in the letter and then resolved with the City of Fort Collins before installation of base course or asphalt will be allowed on the streets.

26. All utility installations within or across the roadbed of new residential roads must be completed prior to the final stages of road construction. For the purposes of these standards, any work except c/g above the subgrade is considered final stage work. All service lines must be stubbed to the property lines and marked so as to reduce the excavation necessary for building connections.

27. Portions of Larimer County are within overlay districts. The Larimer County Flood Plain Resolution should be referred to for additional criteria for roads within these districts.

28. All road construction in areas designated as Wild Fire Hazard Areas shall be done in accordance with the construction criteria as established in the Wild Fire Hazard Area Mitigation Regulations in force at the time of final plat approval.

29. Prior to the commencement of any construction, the contractor shall contact the Local Entity Forester to schedule a site inspection for any tree removal requiring a permit.

30. The Developer shall be responsible for all aspects of safety including, but not limited to, excavation, trenching, shoring, traffic control, and security. Refer to OSHA Publication 2226, Excavating and Trenching.

31. The Developer shall submit a Construction Traffic Control Plan, in accordance with MUTCD, to the appropriate Right-of-Way authority. (The City of Fort Collins, Larimer County, Colorado), for approval, prior to any construction activities within, or affecting, the Right-of-Way. The Developer shall be responsible for providing any and all traffic control devices as may be required by th e construction activities.

32. Prior to the commencement of any construction that will affect traffic signs of any type, the contractor shall contact the City of Fort Collins Traffic Operations Department, who will temporarily remove or relocate the sign at no cost to the contractor, however, if the contractor moves the traffic sign then the contractor will be charged for the labor, materials and equipment to reinstall the sign as needed.

33. The Developer is responsible for all costs for the initial installation of traffic signing and striping for the Development related to the Development's local street operations. In addition, the Developer is responsible for all costs for traffic signing and striping related to directing traffic access to and from the Development.

34. There shall be no site construction activities on Saturdays, unless specifically approved by the City of Fort Collins Engineer, and no site construction activities on Sundays or holidays, unless there is prior written approval by City of Fort Collins.

35. The Developer is responsible for providing all labor and materials necessary for the completion of the intended improvements, shown on these drawings, or designated to be provided, installed, or constructed, unless specifically noted otherwise.

36. Dimensions for layout and construction are not to be scaled from any drawing. If pertinent dimensions are not shown, contact the Designer for clarification, and annotate the dimension on the as-built record drawings.

37. The Developer shall have, onsite at all times, one (1) signed copy of the approved plans, one (1) copy of the appropriate standards and specifications, and a copy of any permits and extension agreements needed for the job.

38. If, during the construction process, conditions are encountered which could indicate a situation that is not identified in the plans or specifications, the Developer shall contact the Designer and the City of Fort Collins Engineer immediately.

39. The Developer shall be responsible for recording as-built information on a set of record drawings kept on the construction site, and available to the Larimer County's Inspector at all times. Upon completion of the work, the contractor(s) shall submit record drawings to the City of Fort Collins Engineer.

40. The Designer shall provide, in this location on the plan, the location and description of the nearest survey benchmarks (2) for the project as well as the basis of bearings. The information shall be as follows:

    PROJECT DATUM: NAVD 29 (OLD CITY OF FORT COLLINS DATUM)

    City of Fort Collins Benchmark 01-93
    South Shields St. at the entrance to Rolland Moore Park ,on the East end of a planter on top of the curb.
    ELEV. = 5023.27

    City of Fort Collins Benchmark 29-92
    Approximate 300 feet South of West Prospect Rd. and Shields St., on the North end of the West Bridge Parapet Wall.
    ELEV. = 5022.50

    NOTE: IF NAVD 88 DATUM IS REQUIRED FOR ANY PURPOSE, THE FOLLOWING EQUATION SHOULD BE USED:
    NAVD88 = NGVD29 UNADJUSTED + 3.17'

    Basis of Bearings
    Easterly line of Tract "H", Third Replat of Hill Pond on Spring Creek, First Filing as bearing
    South 12° 20' 00" East (assumed bearing).

41. All stationing is based on centerline of roadways unless otherwise noted.

42. Damaged curb, gutter and sidewalk existing prior to construction, as well as existing fences, trees, streets, sidewalks, curbs and gutters, landscaping, structures, and improvements destroyed, damaged or removed due to construction of this project, shall be replaced or restored in like kind at the Developer's expense, unless otherwise indicated on these plans, prior to the acceptance of completed improvements and/or prior to the issuance of the first Certificate of Occupancy.

43. When an existing asphalt street must be cut, the street must be restored to a condition equal to or better than its original condition. The existing street condition shall be documented by the City of Fort Collins Construction Inspector before any cuts are made. Patching shall be done in accordance with the City of Fort Collins Street Repair Standards. The finished patch shall blend in smoothly into the existing surface. All large patches shall be paved with an asphalt lay-down machine. In streets where more than one cut is made, an overlay of the entire street width, including the patched area, may be required. The determination of need for a complete overlay shall be made by the Larimer County Engineer and/or the City of Fort Collins Inspector at the time the cuts are made.

44. Upon completion of construction, the site shall be cleaned and restored to a condition equal to, or better than, that which existed before construction, or to the grades and condition as required by these plans.

45. Standard Handicap ramps are to be constructed at all curb returns and at all "T" intersections.

46. After acceptance by the City of Fort Collins, public improvements depicted in these plans shall be guaranteed to be free from material and workmanship defects for a minimum period of two years from the date of acceptance.

47. The City of Fort Collins shall not be responsible for the maintenance of roadway and appurtenant improvements, including storm drainage structures and pipes, for the following private streets: N.A.

48. Approved Variances are listed as follows:
    a. N/A

CONSTRUCTION NOTES

A. Grading and Erosion Control Notes

1. The erosion control inspector must be notified at least twenty-four (24) hours prior to any construction on this site.

2. There shall be no earth-disturbing activity outside the limits designated on the accepted plans.

3. All required perimeter silt and construction fencing shall be installed prior to any land disturbing activity (stockpiling, stripping, grading, etc). All other required erosion control measures shall be installed at the appropriate time in the construction sequence as indicated in the approved project schedule, construction plans, and erosion control report.

4. At all times during construction, the Developer shall be responsible for preventing and controlling on-site erosion including keeping the property sufficiently watered so as to minimize wind blown sediment. The Developer shall also be responsible for installing and maintaining all erosion control facilities shown herein.

5. Pre-disturbance vegetation shall be protected and retained wherever possible. Removal or disturbance of existing vegetation shall be limited to the area(s) required for immediate construction operations, and for the shortest practical period of time.

6. All soils exposed during land disturbing activity (stripping, grading, utility installations, stockpiling, filling, etc.) shall be kept in a roughened condition by ripping or disking along land contours until mulch, vegetation, or other permanent erosion control BMPs are installed. No soils in areas outside project street rights-of-way shall remain exposed by land disturbing activity for more than thirty (30) days before required temporary or permanent erosion control (e.g. seed/mulch, landscaping, etc.) is installed, unless otherwise approved by the City/County.

7. In order to minimize erosion potential, all temporary (structural) erosion control measures shall:

    a. Be inspected at a minimum of once every two (2) weeks and after each significant storm event and repaired or reconstructed as necessary in order to ensure the continued performance of their intended function.
    b. Remain in place until such time as all the surrounding disturbed areas are sufficiently stabilized as determined by the erosion control inspector.
    c. Be removed after the site has been sufficiently stabilized as determined by the erosion control inspector.

8. When temporary erosion control measures are removed, the Developer shall be responsible for the clean up and removal of all sediment and debris from all drainage infrastructure and other public facilities.

9. The contractor shall immediately clean up any construction materials inadvertently deposited on existing streets, sidewalks, or other public rights of way, and make sure streets and walkways are cleaned at the end of each working day.

10. All retained sediments, particularly those on paved roadway surfaces, shall be removed and disposed of in a manner and location so as not to cause their release into any waters of the United States.

11. No soil stockpile shall exceed ten (10) feet in height. All soil stockpiles shall be protected from sediment transport by surface roughening, watering, and perimeter silt fencing. Any soil stockpile remaining after thirty (30) days shall be seeded and mulched.

12. The stormwater volume capacity of detention ponds will be restored and storm sewer lines will be cleaned upon completion of the project and before turning the maintenance over to the City/County or Homeowners Association (HOA).

13. City Ordinance and Colorado Discharge Permit System (CDPS) requirements make it unlawful to discharge or allow the discharge of any pollutant or contaminated water from construction sites. Pollutants include, but are not limited to discarded building materials, concrete truck washout, chemicals, oil and gas products, litter, and sanitary waste. The developer shall at all times take whatever measures are necessary to assure the proper containment and disposal of pollutants on the site in accordance with any and all applicable local, state, and federal regulations.

14. A designated area shall be provided on site for concrete truck chute washout. The area shall be constructed so as to contain washout material and located at least fifty (50) feet away from any waterway during construction. Upon completion of construction activities the concrete washout material will be removed and properly disposed of prior to the area being restored.

15. Conditions in the field may warrant erosion control measures in addition to what is shown on these plans. The Developer shall implement whatever measures are determined necessary, as directed by the City.

16. For additional information see separate Stormwater Management Plan / Erosion Control Report for Hill Pond Residences.

B. Street Improvement Notes

1. All street construction is subject to the General Notes on the cover sheet of these plans as well as the Street Improvements Notes listed here.

2. A paving section design, signed and stamped by a Colorado licensed Engineer, must be submitted to the City of Fort Collins Engineer for approval, prior to any street construction activity, (full depth asphalt sections are not permitted at a depth greater than 8 inches of asphalt). The job mix shall be submitted for approval prior to placement of any asphalt.

3. Where proposed paving adjoins existing asphalt, the existing asphalt shall be saw cut, a minimum distance of 12 inches from the existing edge, to create a clean construction joint. The Developer shall be required to remove existing pavement to a distance where a clean construction joint can be made. Wheel cuts shall not be allowed unless approved by the City of Fort Collins Engineer in Fort Collins.

4. Street subgrades shall be scarified the top 12 inches and re-compacted prior to subbase installation. No base material shall be laid until the subgrade has been inspected and approved by the City of Fort Collins Engineer.

5. Ft. Collins only. Valve boxes and manholes are to be brought up to grade at the time of pavement placement or overlay. Valve box adjusting rings are not allowed.

6. When an existing asphalt street must be cut, the street must be restored to a condition equal to or better than its original condition. The existing street condition shall be documented by the Inspector before any cuts are made. Cutting and patching shall be done in conformance with Chapter 25, Reconstruction and Repair. The finished patch shall blend smoothly into the existing surface. The determination of need for a complete overlay shall be made by the City of Fort Collins Engineer. All overlay work shall be coordinated with adjacent landowners such that future projects do not cut the new asphalt overlay work.

7. All traffic control devices shall be in conformance with these plans or as otherwise specified in M.U.T.C.D. (including Colorado supplement) and as per the Right-of-Way Work Permit traffic control plan.

8. The Developer is required to perform a gutter water flow test in the presence of the City of Fort Collins Inspector and prior to installation of asphalt. Gutters that hold more than 1/4 inch deep or 5 feet longitudinally, of water, shall be completely removed and reconstructed to drain properly.

9. Prior to placement of H.B.P. or concrete within the street and after moisture/density tests have been taken on the subgrade material (when a full depth section is proposed) or on the subgrade and base material (when a composite section is proposed), a mechanical "proof roll" will be required. The entire subgrade and/or base material shall be rolled with a heavily loaded vehicle having a total GVW of not less than 50,000 lbs. and a single axle weight of at least 18,000 lbs. with pneumatic tires inflated to not less that 90 p.s.i.g. "Proof roll" vehicles shall not travel at speeds greater than 3 m.p.h. Any portion of the subgrade or base material which exhibits excessive pumping or deformation, as determined by the City of Fort Collins Engineer, shall be reworked, replaced or otherwise modified to form a smooth, non-yielding surface. The City of Fort Collins Engineer shall be notified at least 24 hours prior to the "proof roll." All "proof rolls" shall be preformed in the presence of an Inspector.

C. Traffic Signing and Pavement Marking Construction Notes

1. All signage and marking is subject to the General Notes on the cover sheet of these plans, as well as the Traffic Signing and Marking Construction Notes listed here.

2. All symbols, including arrows, ONLYS, crosswalks, stop bars, etc. shall be pre-formed thermo-plastic.

3. All signage shall be per the City of Fort Collins Standards and these plans or as otherwise specified in MUTCD.

4. All lane lines for asphalt pavement shall receive two coats of latex paint with glass beads.

5. All lane lines for concrete pavement should be epoxy paint.

6. Prior to permanent installation of traffic striping and symbols, the Developer shall place temporary tabs or tape depicting alignment and placement of the same. Their placement shall be approved by the City of Fort Collins Traffic Engineer prior to permanent installation of striping and symbols.

7. Pre-formed thermo-plastic applications shall be as specified in these Plans and/or these Standards.

8. Epoxy applications shall be applied as specified in CDOT Standard Specifications for Road and Bridge Construction.

9. All surfaces shall be thoroughly cleaned prior to installation of striping or markings.

10. All sign posts shall utilize break-away assemblies and fasteners per the Standards.

11. A field inspection of location and installation of all signs shall be performed by the City of Fort Collins Traffic Engineer. All discrepancies identified during the field inspection must be corrected before the 2-year warranty period will begin.

12. The Developer installing signs shall be responsible for locating and protecting all underground utilities.

13. Special care shall be taken in sign location to ensure an unobstructed view of each sign.

14. Signage and striping has been determined by information available at the time of review. Prior to initiation of the warranty period,the City of Fort Collins Traffic Engineer reserves the right to require additional signage and/or striping if the City of Fort Collins Traffic Engineer determines that an unforeseen condition warrants such signage according to the MUTCD or the CDOT M and S Standards. All signage and striping shall fall under the requirements of the 2-year warranty period for new construction (except fair wear on traffic markings).

15. Sleeves for sign posts shall be required for use in islands/medians. Refer to Chapter 14, Traffic Control Devices, for additional detail.

D. Storm Drainage Notes

1. The City of Fort Collins shall not be responsible for the maintenance of storm drainage facilities located on private property. Maintenance of onsite drainage facilities shall be the responsibility of the property owner(s).

2. All recommendations of the "Preliminary Drainage Report for Hill Pond Residences" dated January 21, 2015 by Northern Engineering shall be followed and implemented.

3. Prior to final inspection and acceptance by the City of Fort Collins, certification of the drainage facilities, by a registered engineer, must by submitted to and approved by the Stormwater Utility Department. Certification shall be submitted to the Stormwater Utility Department at least two weeks prior to the release of a certificate of occupancy for single family units. For commercial properties, certification shall by submitted to the Stormwater Utility Department at least two weeks prior to the release of any building permits in excess of those allowed prior to certification per the Development Agreement.

E. Utility Notes

1. All waterline and sanitary sewer construction shall conform to the City of Fort Collins Utility standards and specifications current to date of construction.

2. The minimum cover over water lines is 4.5 feet and the maximum cover is 5.5 feet unless otherwise noted in the plans and approved by the water utility.

3. Water mains shall be poly-wrapped D.I.P, or PVC with tracer wire.

4. HDPE pipe may be used for 1-1/2 and 2 inch water services. The pipe shall meet the standards of AWWA 901, NSF Standard 61 and ASTM. The HDPE pipe shall be SDR 9 having a pressure rating of 200 psi. Stiffeners shall be used at all fittings and connections. Tracer wire shall be installed with the HDPE service, and shall extend up the curb stop. The curb stop shall be covered with a metal box and tracer wire test lid per City Water Detail 25.

CALL UTILITY NOTIFICATION CENTER OF COLORADO

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CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED:	City Engineer	Date
CHECKED BY:	Water & Wastewater Utility	Date
CHECKED BY:	Stormwater Utility	Date
CHECKED BY:	Parks & Recreation	Date
CHECKED BY:	Traffic Engineer	Date
CHECKED BY:	Environmental Planner	Date

No. | Revisions: | By: | Date:

REVIEW SET
NOT FOR CONSTRUCTION
02/11/15

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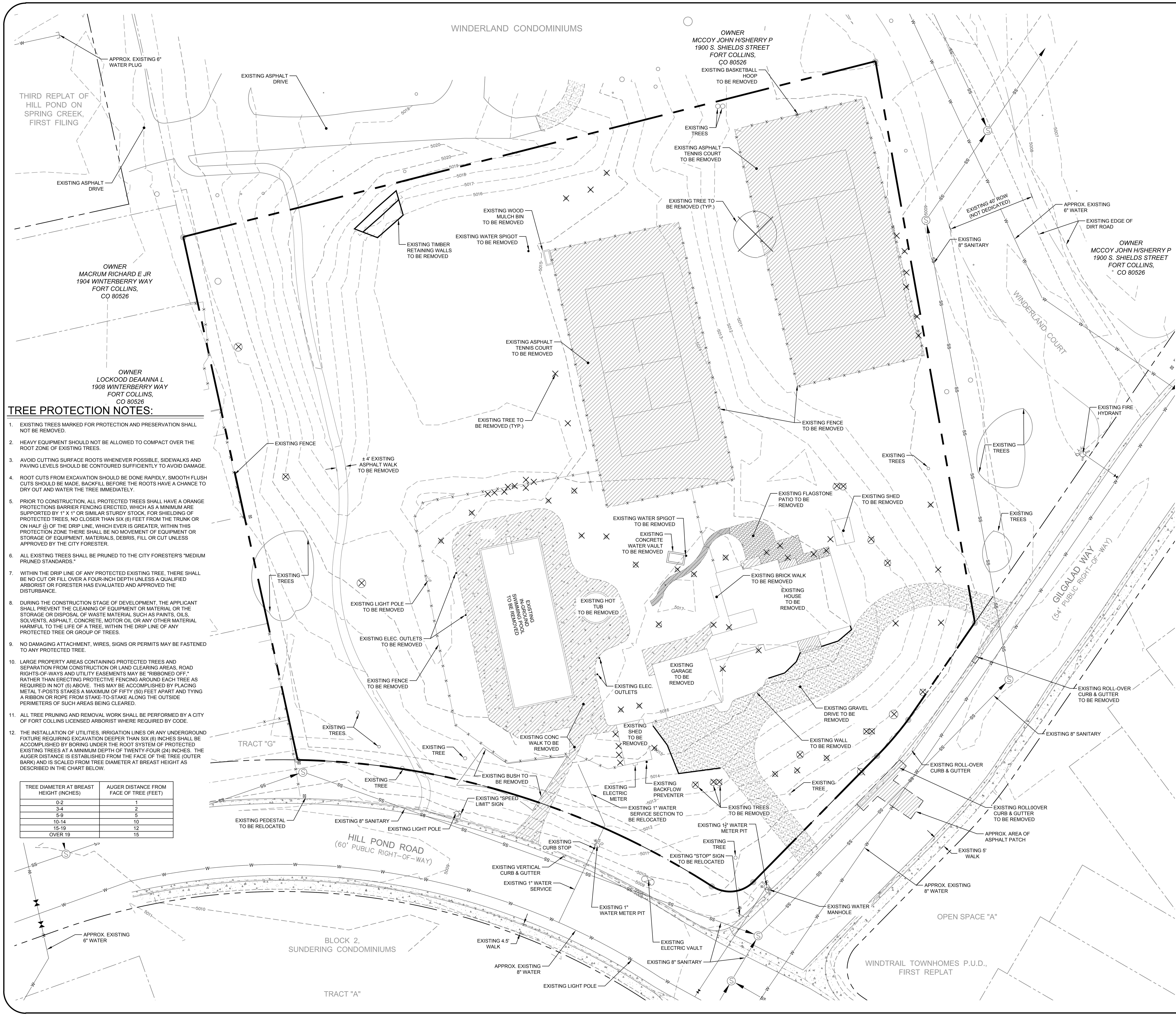
NORTHERN ENGINEERING
PHONE: 970.221.4158
www.northernengineering.com
301 North Howes Street, Suite 010
Fort Collins, Colorado 80521

PROJECT: 620-004	DATE: February 11, 2015	
DESIGNED BY: A. Reese	SCALE: N/A	
DRAWN BY: B. Ruch	REVIEWED BY: N. Haws	

HILL POND RESIDENCES

GENERAL & CONSTRUCTION NOTES

Sheet
CS2
Of 15 Sheets



TREE PROTECTION NOTES:

1. EXISTING TREES MARKED FOR PROTECTION AND PRESERVATION SHALL NOT BE REMOVED.
2. HEAVY EQUIPMENT SHOULD NOT BE ALLOWED TO COMPACT OVER THE ROOT ZONE OF EXISTING TREES.
3. AVOID CUTTING SURFACE ROOTS WHENEVER POSSIBLE, SIDEWALKS AND PAVING LEVELS SHOULD BE CONTOURED SUFFICIENTLY TO AVOID DAMAGE.
4. ROOT CUTS FROM EXCAVATION SHOULD BE DONE RAPIDLY, SMOOTH FLUSH CUTS SHOULD BE MADE, BACKFILL BEFORE THE ROOTS HAVE A CHANCE TO DRY OUT AND WATER THE TREE IMMEDIATELY.
5. PRIOR TO CONSTRUCTION, ALL PROTECTED TREES SHALL HAVE A ORANGE PROTECTIONS BARRIER FENCING ERECTED, WHICH AS A MINIMUM ARE SUPPORTED BY 1" X 1" OR SIMILAR STURDY STOCK, FOR SHIELDING OF PROTECTED TREES, NO CLOSER THAN SIX (6) FEET FROM THE TRUNK OR ON HALF ($\frac{1}{2}$) OF THE DRIP LINE, WHICH EVER IS GREATER, WITHIN THIS PROTECTION ZONE THERE SHALL BE NO MOVEMENT OF EQUIPMENT OR STORAGE OF EQUIPMENT, MATERIALS, DEBRIS, FILL OR CUT UNLESS APPROVED BY THE CITY FORESTER.
6. ALL EXISTING TREES SHALL BE PRUNED TO THE CITY FORESTER'S "MEDIUM PRUNED STANDARDS."
7. WITHIN THE DRIP LINE OF ANY PROTECTED EXISTING TREE, THERE SHALL BE NO CUT OR FILL OVER A FOUR-INCH DEPTH UNLESS A QUALIFIED ARBORIST OR FORESTER HAS EVALUATED AND APPROVED THE DISTURBANCE.
8. DURING THE CONSTRUCTION STAGE OF DEVELOPMENT, THE APPLICANT SHALL PREVENT THE CLEANING OF EQUIPMENT OR MATERIAL OR THE STORAGE OR DISPOSAL OF WASTE MATERIAL SUCH AS PAINTS, OILS, SOLVENTS, ASPHALT, CONCRETE, MOTOR OIL OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF A TREE, WITHIN THE DRIP LINE OF ANY PROTECTED TREE OR GROUP OF TREES.
9. NO DAMAGING ATTACHMENT, WIRES, SIGNS OR PERMITS MAY BE FASTENED TO ANY PROTECTED TREE.
10. LARGE PROPERTY AREAS CONTAINING PROTECTED TREES AND SEPARATION FROM CONSTRUCTION OR LAND CLEARING AREAS, ROAD RIGHTS-OF-WAYS AND UTILITY EASEMENTS MAY BE "RIBBONED OFF," RATHER THAN ERECTING PROTECTIVE FENCING AROUND EACH TREE AS REQUIRED IN NOT (5) ABOVE. THIS MAY BE ACCOMPLISHED BY PLACING METAL T-POSTS STAKES A MAXIMUM OF FIFTY (50) FEET APART AND TYING A RIBBON OR ROPE FROM STAKE-TO-STAKE ALONG THE OUTSIDE PERIMETERS OF SUCH AREAS BEING CLEARED.
11. ALL TREE PRUNING AND REMOVAL WORK SHALL BE PERFORMED BY A CITY OF FORT COLLINS LICENSED ARBORIST WHERE REQUIRED BY CODE.
12. THE INSTALLATION OF UTILITIES, IRRIGATION LINES OR ANY UNDERGROUND FIXTURE REQUIRING EXCAVATION DEEPER THAN SIX (6) INCHES SHALL BE ACCOMPLISHED BY BORING UNDER THE ROOT SYSTEM OF PROTECTED EXISTING TREES AT A MINIMUM DEPTH OF TWENTY-FOUR (24) INCHES. THE AUGER DISTANCE IS ESTABLISHED FROM THE FACE OF THE TREE (OUTER BARK) AND IS SCALED FROM TREE DIAMETER AT BREAST HEIGHT AS DESCRIBED IN THE CHART BELOW.

TREE DIAMETER AT BREAST HEIGHT (INCHES)	AUGER DISTANCE FROM FACE OF TREE (FEET)
0-2	1
3-4	2
5-9	5
10-14	10
15-19	12
OVER 19	15

NORTH

20 0 20 40 60 Feet

(IN FEET)
1 inch = 20 ft.

LEGEND:

PROPERTY BOUNDARY	
EXISTING RIGHT-OF-WAY	
EXISTING MAJOR CONTOUR	5015
EXISTING MINOR CONTOUR	5013
EXISTING STORM SEWER	ST
EXISTING SANITARY SEWER	SS
EXISTING WATER	W
EXISTING FENCE	X
EXISTING ELECTRIC VAULT	
EXISTING FIRE HYDRANT	
EXISTING VALVE	
EXISTING WATER METER	
EXISTING TELEPHONE PEDESTAL	
EXISTING TREES (TO REMAIN)	
EXISTING TREES (TO BE REMOVED)	
EXISTING PAVEMENT TO BE REMOVED	

FIELD SURVEY BY:

ORIGINAL FIELD SURVEY:
INTERMILL LAND SURVEYING, INC.
PROJECT NO. P-13-7461
DATE: OCTOBER 28, 2013

SUBSURFACE EXPLORATION BY:

PRELIMINARY GEOTECHNICAL INVESTIGATION
PROPOSED HILLPOND PROJECT
NORTH OF HILLPOND ROAD AND GILGALAD WAY
FORT COLLINS COLORADO
PROJECT NO. FC06692-115
DATE: SEPTEMBER 16, 2014

NOTES:

1. THE SIZE, TYPE AND LOCATION OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THESE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE OF ALL UNDERGROUND UTILITIES IN THE AREA OF THE WORK. BEFORE COMMENCING NEW CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR ALL UNKNOWN UNDERGROUND UTILITIES.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING DEMOLITION, REMOVAL, REPLACEMENT, AND DISPOSAL OF ALL FACILITIES AND MATERIAL.
3. CONTRACTOR IS ENCOURAGED TO PERFORM DEMOLITION IN A MANNER THAT MAXIMIZES SALVAGE, RE-USE, AND RECYCLING OF MATERIALS. THIS INCLUDES APPROPRIATE SORTING AND STORING. IN PARTICULAR, DEMOLISHED CONCRETE, ASPHALT, AND BASE COURSE SHOULD BE RECYCLED IF POSSIBLE. THE CITY OF FORT COLLINS STREET DEPARTMENT OPERATES A CRUSHING OPERATION THAT WILL ACCEPT CONCRETE MATERIAL AT NO COST FOR CRUSHING AND RE-USE AS RECYCLED AGGREGATE. THIS OPERATION IS LOCATED AT 1380 HOFFMAN MILL ROAD AND CAN BE REACHED AT (970) 482-1249.
4. ALL SYMBOLS ARE ONLY GRAPHICALLY REPRESENTED AND ARE NOT TO SCALE.
5. CONTACT THE PROJECT SURVEYOR FOR ANY INQUIRIES RELATED TO THE EXISTING SITE SURVEY.
6. LIMITS OF STREET CUT ARE APPROXIMATE. FINAL LIMITS ARE TO BE DETERMINED IN THE FIELD BY THE CITY ENGINEERING INSPECTOR. ALL REPAIRS TO BE IN ACCORDANCE WITH CITY STREET REPAIR STANDARDS.
7. REFER TO LANDSCAPE PLANS FOR TREE PROTECTION AND MITIGATION.
8. ADDITIONAL TREES NOT SHOWN ON THESE PLANS MAY EXIST AND MAY REQUIRED REMOVAL. COORDINATION OF WHICH TREES ARE TO REMAIN AND WHICH ARE TO BE REMOVED SHOULD BE COORDINATED WITH THE CITY FORESTER. REFER TO LANDSCAPE PLANS AND TREE MITIGATION PLAN FOR ADDITIONAL INFORMATION.

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UTILITY PLAN APPROVAL

APPROVED:	City Engineer	Date
CHECKED BY:	Water & Wastewater Utility	Date
CHECKED BY:	Stormwater Utility	Date
CHECKED BY:	Parks & Recreation	Date
CHECKED BY:	Traffic Engineer	Date
CHECKED BY:	Environmental Planner	Date

REVIEW SET
NOT FOR CONSTRUCTION
02/11/15

No.	Revisions:	By:	Date:

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NORTHERN ENGINEERING
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521
PHONE: 970.221.4158
www.northernengineering.com

PROJECT: 520-004	DATE: February 11, 2015	
DESIGNED BY: A. Reese	SCALE: 1"=20'	
DRAWN BY: B. Ruch	REVIEWED BY: N. Haws	

HILL POND RESIDENCES
EXISTING CONDITIONS & DEMOLITION PLAN

Sheet
EX1
Of 15 Sheets

NORTH

20 0 20 40 60 Feet

(IN FEET)
1 inch = 20 ft.

LEGEND:

PROPOSED VERTICAL CURB & GUTTER
PROPERTY BOUNDARY
EXISTING RIGHT-OF-WAY
EASEMENTS
PERMEABLE PAVERS
PRIVATE CONCRETE PAVING
PUBLIC CONCRETE PAVING
ASPHALT PATCH

NOTES:

1. SEE DETAIL SHEETS FOR ADDITIONAL INFORMATION REGARDING CURBS AND PAVEMENT SECTIONS.
2. PAVEMENT MARKINGS SHALL BE PER CITY STANDARDS AND PROJECT SPECIFICATION MANUAL.
3. PERMEABLE PAVER AREAS SHALL HAVE EDGE RESTRAINTS ALONG ENTIRE PERIMETER IN ACCORDANCE WITH DETAILS AND MANUFACTURER RECOMMENDATIONS.
4. EXTRA CARE SHOULD BE TAKEN TO PREVENT THE STORAGE OF SOILS OR OTHER MATERIALS DIRECTLY ON THE PAVER SURFACE.
5. LIMITS OF STREET CUT ARE APPROXIMATE. FINAL LIMITS ARE TO BE DETERMINED IN THE FIELD BY THE CITY ENGINEERING INSPECTOR. ALL REPAIRS TO BE IN ACCORDANCE WITH CITY STREET REPAIR STANDARDS.
6. ANY DAMAGED CURB, GUTTER AND SIDEWALK EXISTING PRIOR TO CONSTRUCTION, AS WELL AS STREETS, SIDEWALKS, CURBS AND GUTTERS, DESTROYED, DAMAGED OR REMOVED DUE TO CONSTRUCTION OF THIS PROJECT, SHALL BE REPLACED OR RESTORED TO CITY OR FORT COLLINS STANDARDS AT THE DEVELOPER'S EXPENSE PRIOR TO THE ACCEPTANCE OF COMPLETED IMPROVEMENTS AND/OR PRIOR TO THE ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY.
7. ALL PUBLIC CONCRETE PAVING SHALL BE 6" THICK.

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APPROVED:	City Engineer	Date
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CHECKED BY:	Stormwater Utility	Date
CHECKED BY:	Parks & Recreation	Date
CHECKED BY:	Traffic Engineer	Date
CHECKED BY:	Environmental Planner	Date

No. Revisions: By: Date:

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NE NORTHERN ENGINEERING
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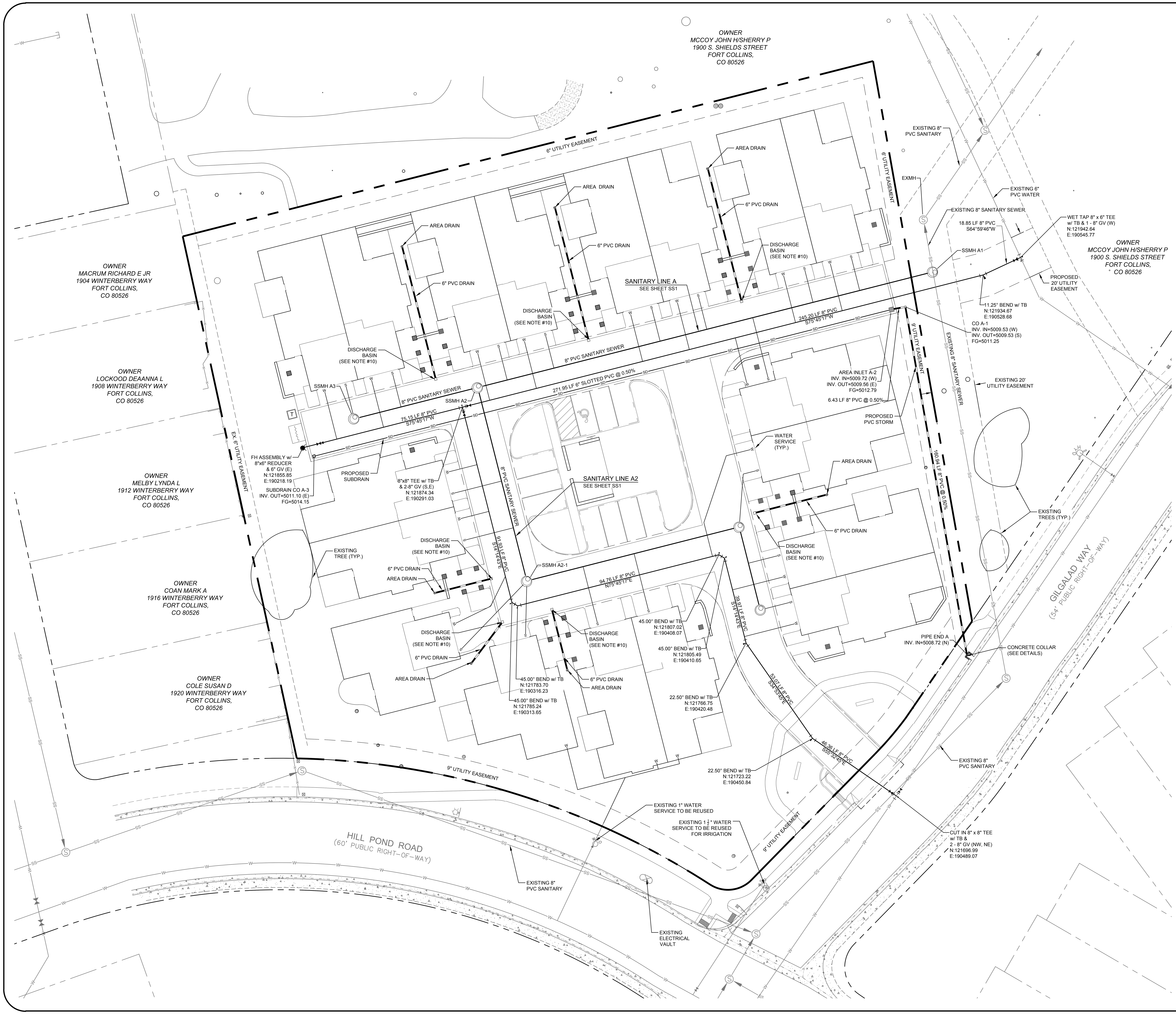
PHONE: 970.221.4158
www.northernengineering.com

PROJECT: 620-004
DATE: February 11, 2015
DESIGNED BY: A. Reese
SCALE: 1"=20'
DRAWN BY: B. Ruch
REVIEWED BY: N. Haws

HILL POND RESIDENCES
PRIVATE STRIPING & PAVING PLAN

Sheet
PV1
Of 15 Sheets



NORTH

20 0 20 40 60 Feet

(IN FEET)
1 inch = 20 ft.

LEGEND:

- EXISTING WATER MAIN
- EXISTING SANITARY SEWER
- PROPOSED SEWER SERVICE
- PROPOSED WATER SERVICE & CURB STOP
- PROPOSED FIRE HYDRANT
- EXISTING FIRE HYDRANT
- PROPOSED SUBDRAIN
- EXISTING STORM SEWER
- PROPOSED ELECTRIC/TELEPHONE/GAS
- EXISTING TELEPHONE
- EXISTING GAS
- PROPOSED CURB & GUTTER
- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- PROPOSED LOTLINE
- EASEMENT LINE
- APPROXIMATE GAS METER LOCATION

NOTES:

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2. ALL WATER AND SEWER CONSTRUCTION SHALL BE PER THE CITY OF FORT COLLINS STANDARD CONSTRUCTION SPECIFICATIONS LATEST EDITION.
3. ALL WATER FITTINGS AND VALVES ARE ONLY GRAPHICALLY REPRESENTED AND ARE NOT TO SCALE.
4. UTILITY SERVICES ARE SHOWN IN A SCHEMATIC FASHION ONLY. EXACT LOCATIONS SHALL BE PER THE REQUIREMENTS OF THE RESPECTIVE UTILITY PROVIDERS, AND ARE SUBJECT TO CHANGE IN THE FIELD.
5. MAINTAIN 10' HORIZONTAL AND 18" VERTICAL MINIMUM SEPARATION BETWEEN ALL SANITARY SEWER MAINS, WATER MAINS & SERVICES.
6. REFER TO THE PLAT FOR LOT AREAS, TRACT SIZES, EASEMENTS, LOT DIMENSIONS, UTILITY EASEMENTS, OTHER EASEMENTS, AND OTHER SURVEY INFORMATION.
7. ALL MULTI-FAMILY WATER SERVICES TO BE 1 1/2". ALL MULTI-FAMILY SEWER SERVICES TO BE 4". SEWER SIZE TO BE CONFIRMED WITH PLUMBING ENGINEER PRIOR TO CONSTRUCTION.
8. LIMITS OF STREET CUT ARE APPROXIMATE. FINAL LIMITS ARE TO BE DETERMINED IN THE FIELD BY THE CITY ENGINEERING INSPECTOR. ALL REPAIRS TO BE IN ACCORDANCE WITH CITY STREET REPAIR STANDARDS.
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10. ALL DISCHARGE BASIN LIDS SHALL BE PEDESTRIAN RATED.

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CHECKED BY:	Parks & Recreation	Date
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CHECKED BY:	Environmental Planner	Date

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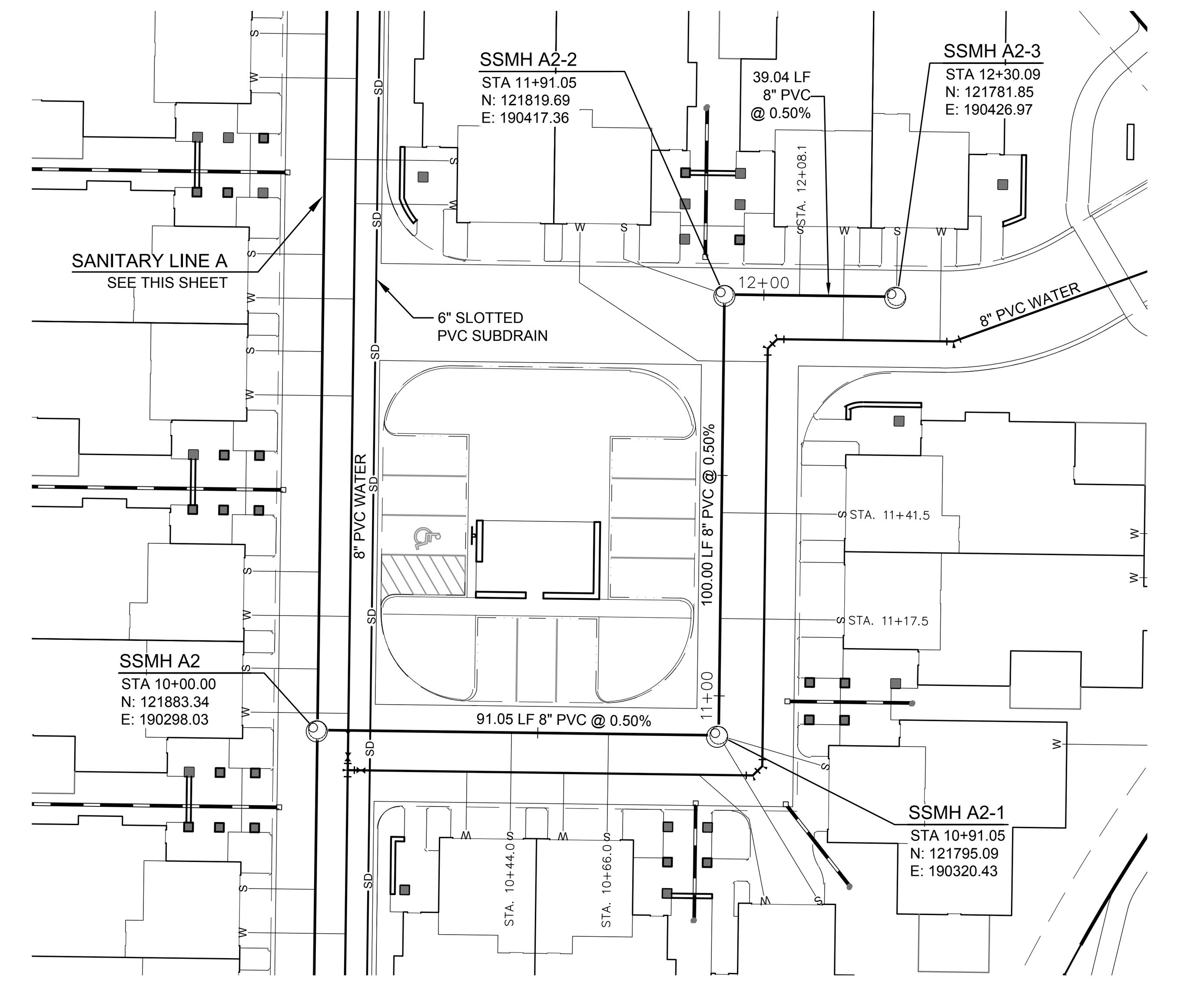
PHONE: 970.221.4158
www.northernengineering.com

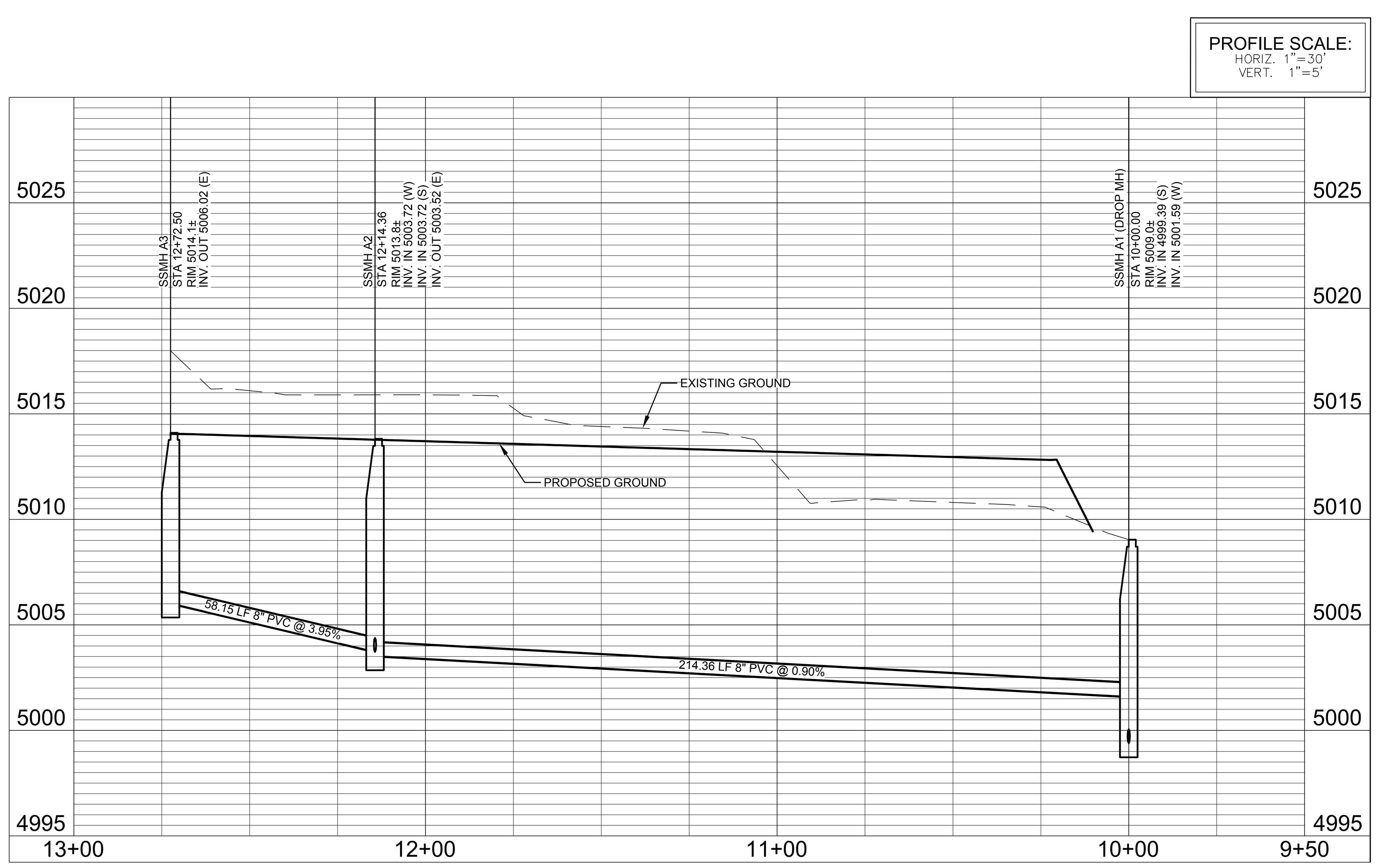
PROJECT: 820-004
DATE: February 11, 2015
DESIGNED BY: A. Reese
SCALE: 1"=20'
DRAWN BY: B. Ruch
REVIEWED BY: N. Haws

HILL POND RESIDENCES
UTILITY PLAN

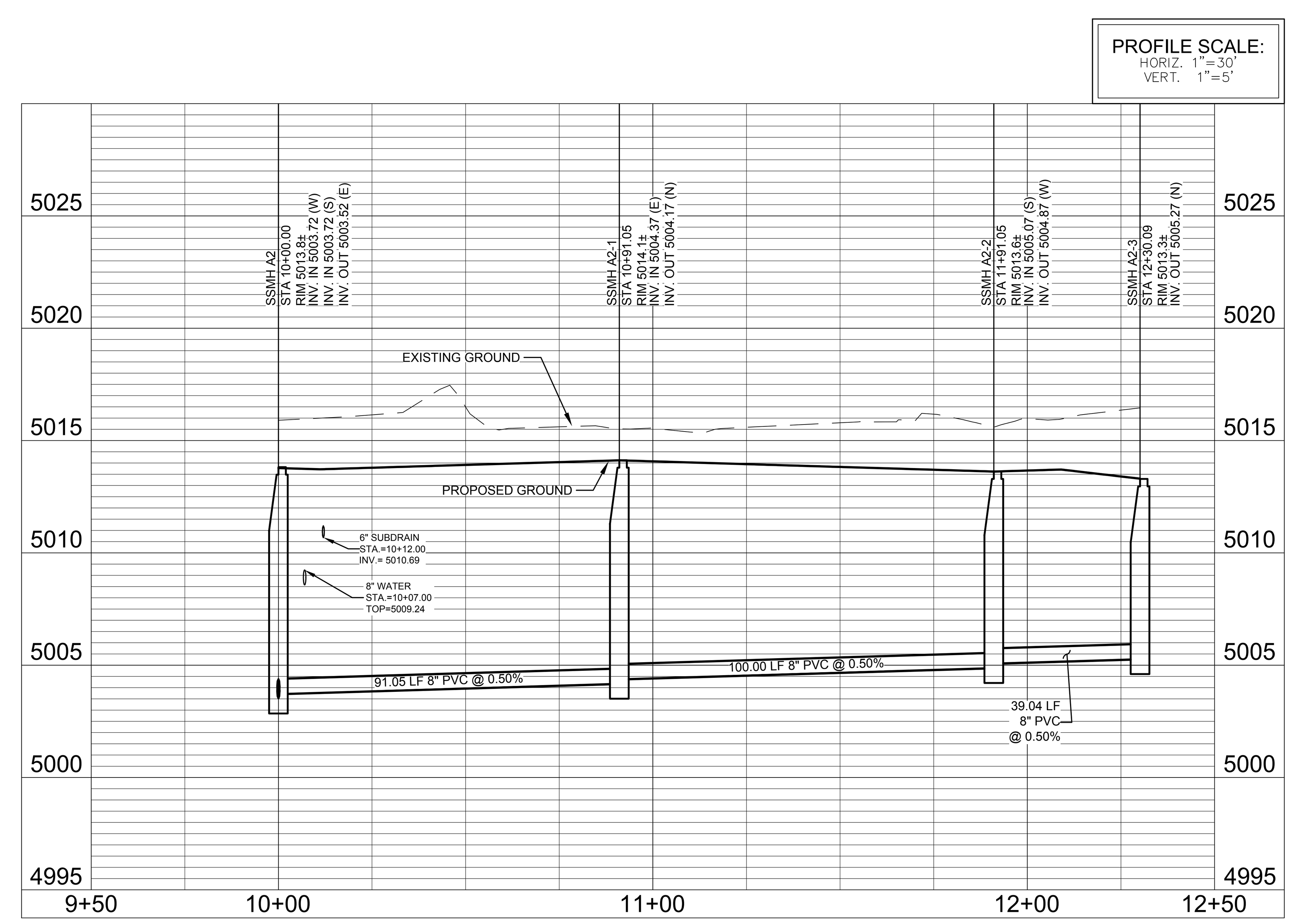
Sheet U1
Of 15 Sheets



SANITARY SEWER LINE A



SANITARY SEWER LINE A2



30 0 30 60 90 Feet
(IN FEET)
1 inch = 30 ft.

LEGEND:

- EXISTING WATER MAIN
- EXISTING SANITARY SEWER
- PROPOSED SEWER SERVICE
- PROPOSED WATER SERVICE & CURB STOP
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- EXISTING FIRE HYDRANT
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- EXISTING STORM SEWER
- PROPOSED ELECTRIC/TELEPHONE/GAS
- EXISTING TELEPHONE
- EXISTING GAS
- PROPOSED CURB & GUTTER
- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- PROPOSED LOTLINE
- EASEMENT LINE
- APPROXIMATE GAS METER LOCATION — GM

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7. ALL MULTI-FAMILY WATER SERVICES TO BE 1½". ALL MULTI-FAMILY SEWER SERVICES TO BE 4". SEWER SIZE TO BE CONFIRMED WITH PLUMBING ENGINEER PRIOR TO CONSTRUCTION.
8. LIMITS OF STREET CUT ARE APPROXIMATE. FINAL LIMITS ARE TO BE DETERMINED IN THE FIELD BY THE CITY ENGINEERING INSPECTOR. ALL REPAIRS TO BE IN ACCORDANCE WITH CITY STREET REPAIR STANDARDS.

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CHECKED BY:	Environmental Planner	Date

No.	Revisions:	By:	Date:

REVIEW SET
NOT FOR CONSTRUCTION
02/11/15

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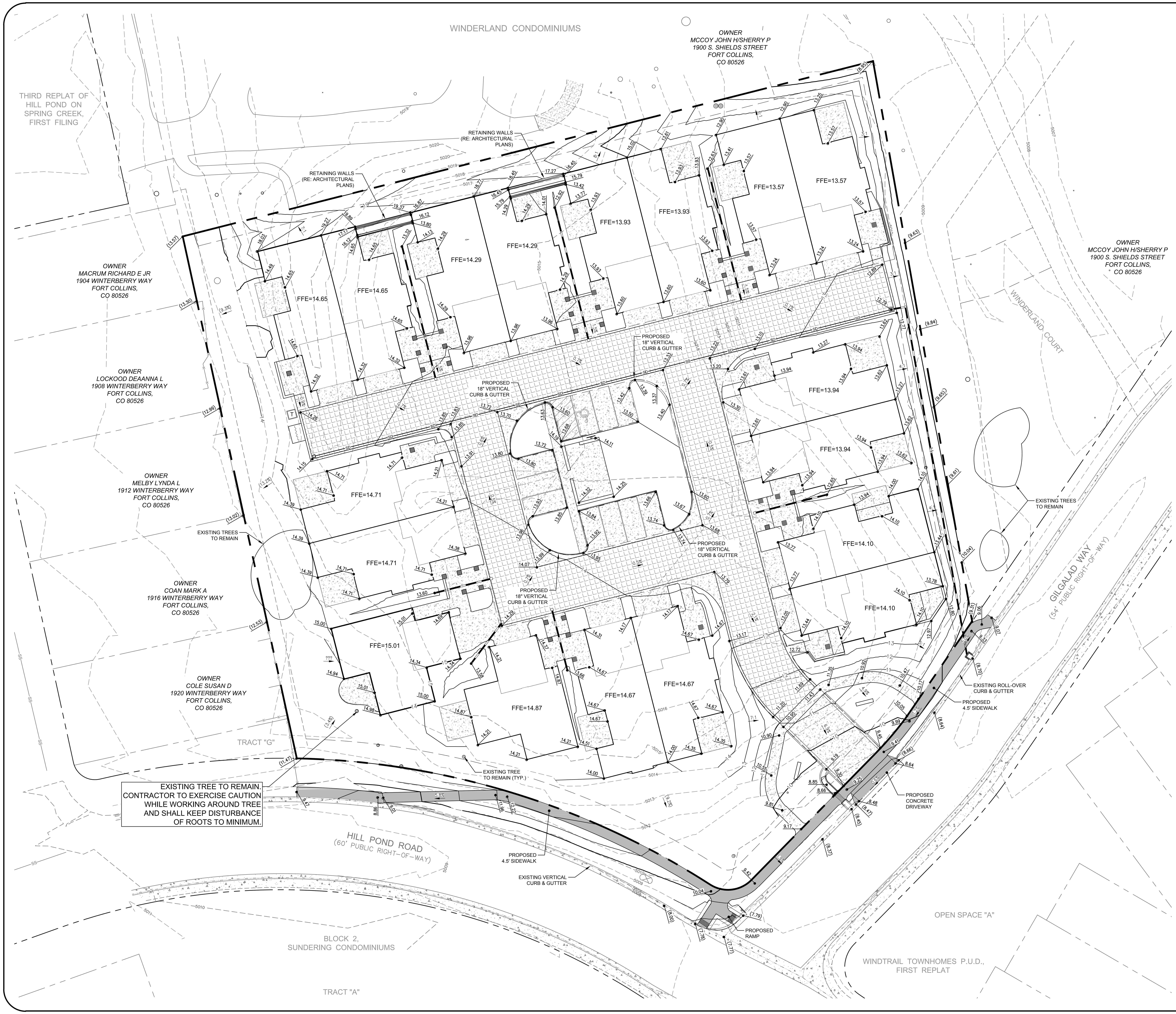
301 North Howes Street, Suite 010
Fort Collins, Colorado 80521
PHONE: 970.221.4158
www.northernengineering.com

PROJECT: 620-004	DESIGNED BY: A. Reese	DRAWN BY: B. Ruch
DATE: February 11, 2015	SCALE: 1"=30'	REVIEWED BY: N. Haws

HILL POND RESIDENCES

SANITARY SEWER PLAN AND PROFILE

Sheet
SS1
Of 15 Sheets



NORTH

20 0 20 40 60 Feet

(IN FEET)
1 inch = 20 ft.

LEGEND:

PROPOSED CONTOUR	93
EXISTING CONTOUR	5013
PROPOSED UNDERDRAIN	SD
PROPOSED SWALE	
PROPOSED PVC STORM	
PROPOSED OUTFALL VERTICAL CURB AND GUTTER	
PROPERTY BOUNDARY	
PROPOSED SPOT ELEVATION	33.43
EXISTING SPOT ELEVATION	(47.45)
PROPOSED SLOPES	2.0%
ELECTRIC TRANSFORMER	

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3. ALL CURB SPOTS SHOWN ARE FLOWLINE ELEVATIONS. ALL OTHER SPOTS ARE FINISHED GRADE ELEVATIONS.
4. THE TOP OF FOUNDATION ELEVATIONS SHOWN ARE THE MINIMUM ELEVATIONS REQUIRED FOR PROTECTION FROM THE 100-YEAR STORM.
5. PROPOSED CURB LIP SHALL MATCH EXISTING ASPHALT ON SPRINGFIELD DRIVE TO ENSURE EXISTING STREET CROSS-SLOPES AND FLOWLINE GRADES MATCH EXISTING CONDITION.

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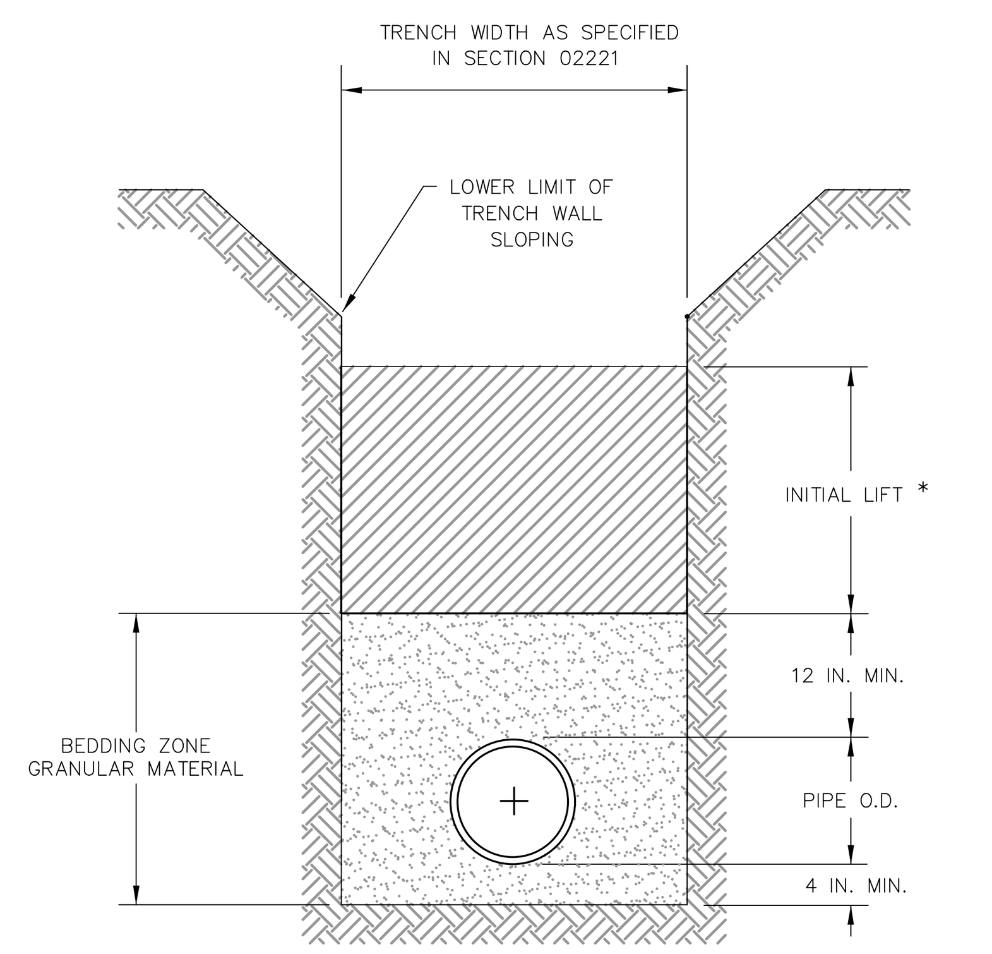
DESIGNED BY: A. Reese
DRAWN BY: B. Ruch
DATE: February 11, 2015
SCALE: 1"=20'
REVIEWED BY: N. Haws

HILL POND RESIDENCES
GRADING PLAN

Sheet G1
Of 15 Sheets

DRAWING FILENAME: D:\Projects\620-004\Dwg\Grad\620-004_GRAD.dwg LAYOUT NAME: G1 DATE: Feb 11, 2015 - 10:18am CAD OPERATOR: ben
LIST OF XREFS: [NES-xborder] [620-004_xEXST] [620-004_xTOPO] [620-004_xSITE] [620-004_xGRAD] [620-004_C3D_Proposed] [620-004_xUTIL]



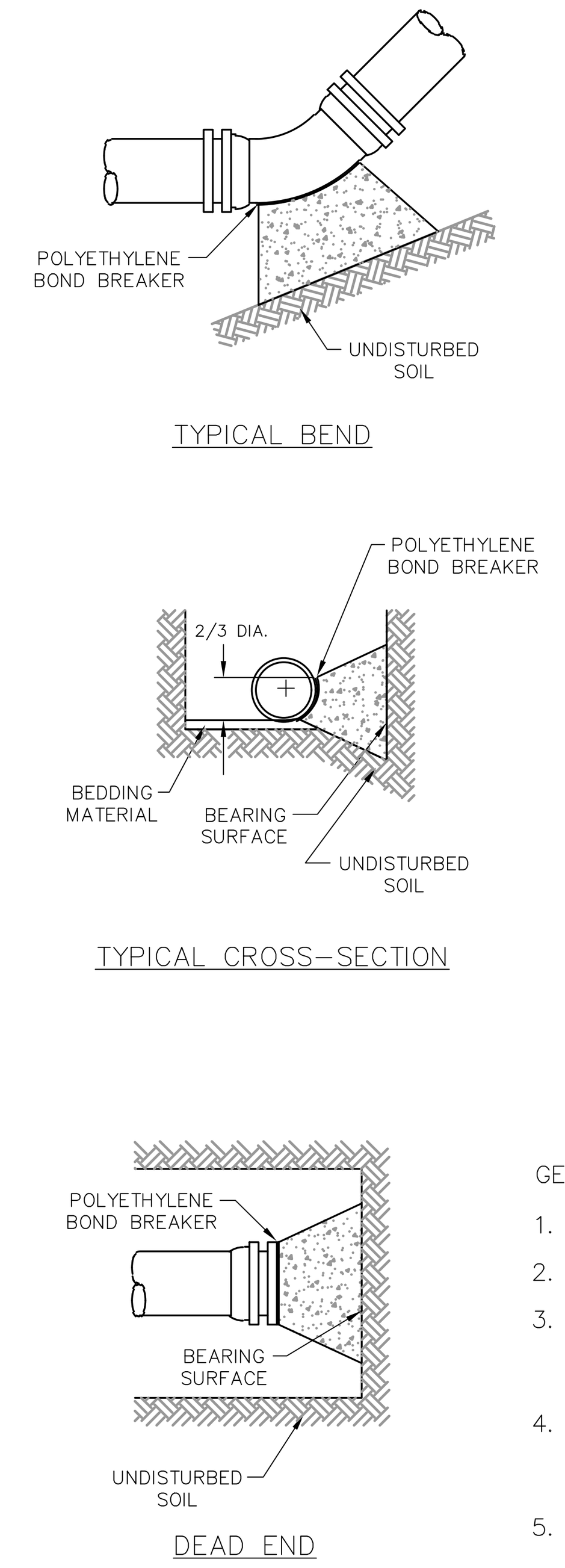
* INITIAL LIFT SHALL NOT EXCEED 2 FEET IN DEPTH.

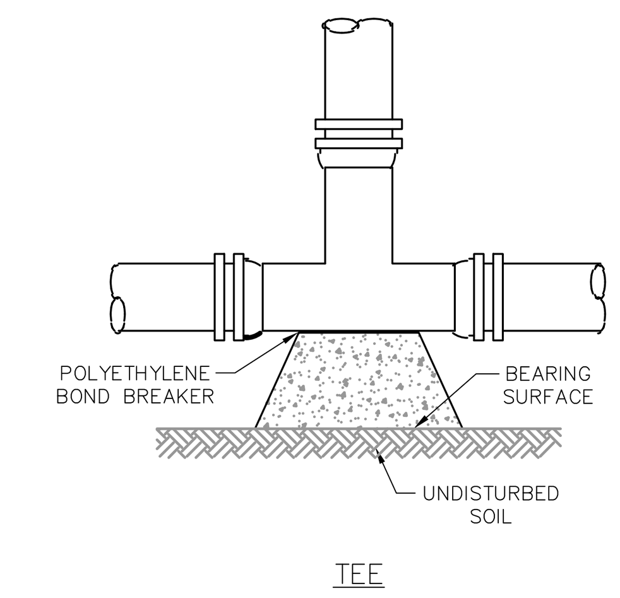
NOTE:

GRANULAR BEDDING MATERIAL SHALL BE A MINIMUM OF 4 INCHES BELOW BOTTOM OF PIPE AND A MINIMUM OF 12 INCHES ABOVE TOP OF PIPE.

CITY OF FORT COLLINS UTILITIES – WATER FIELD OPERATIONS P.O. BOX 580 FORT COLLINS, CO. 80550 (970) 221-6700 | TITLE OF DRAWING: WATER MAIN BEDDING REQUIREMENTS (DIP & PVC) | REVISED DATE: 4/8/11 | DETAIL 1

100 D1 WATER MAIN BEDDING REQUIREMENTS — NOT TO SCALE





MINIMUM BEARING SURFACE AREA (SQ. FT.)

PIPE SIZE	BENDS 11 1/4°	BENDS 22 1/2°	BENDS 45°	BENDS 90°	TEE OR DEAD END
6"	1.0	1.5	2.5	4.5	3.5
8"	1.5	2.5	4.5	8.0	5.5
12"	3.0	4.5	9.0	16.5	12.0
16"	4.8	9.6	18.9	34.7	24.5

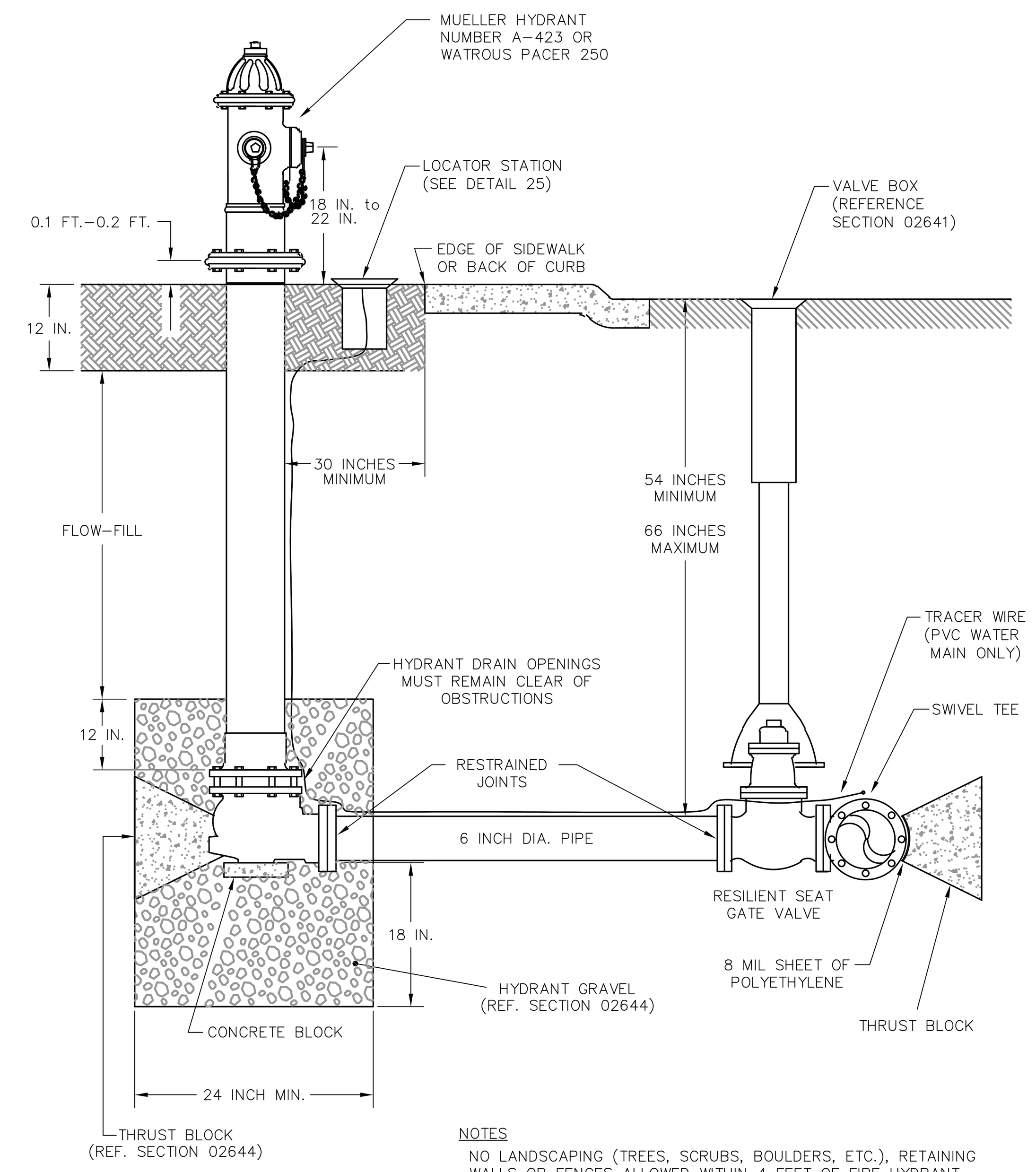
BEARING SURFACES ARE A MINIMUM REQUIREMENT AND DO NOT RELIEVE DESIGN ENGINEER OF RESPONSIBILITY TO DESIGN EACH THRUST BLOCK.

GENERAL NOTES:

1. Bearing surface areas shown in chart are minimum.
2. All fittings to be wrapped with polyethylene.
3. Pipe installed under conditions different from those normally encountered shall require thrust blocks designed for those particular conditions.
4. Thrust blocks on pipe larger than 16 inches diameter shall be designed for conditions existing at the installation site.
5. Refer to Section 03300 for concrete requirements.

CITY OF FORT COLLINS UTILITIES – WATER FIELD OPERATIONS P.O. BOX 580 FORT COLLINS, CO. 80550 (970) 221-6700 | TITLE OF DRAWING: STANDARD CONCRETE THRUST BLOCKS | REVISED DATE: 4/8/11 | DETAIL 2

101 D1 STANDARD THRUST BLOCK — NOT TO SCALE



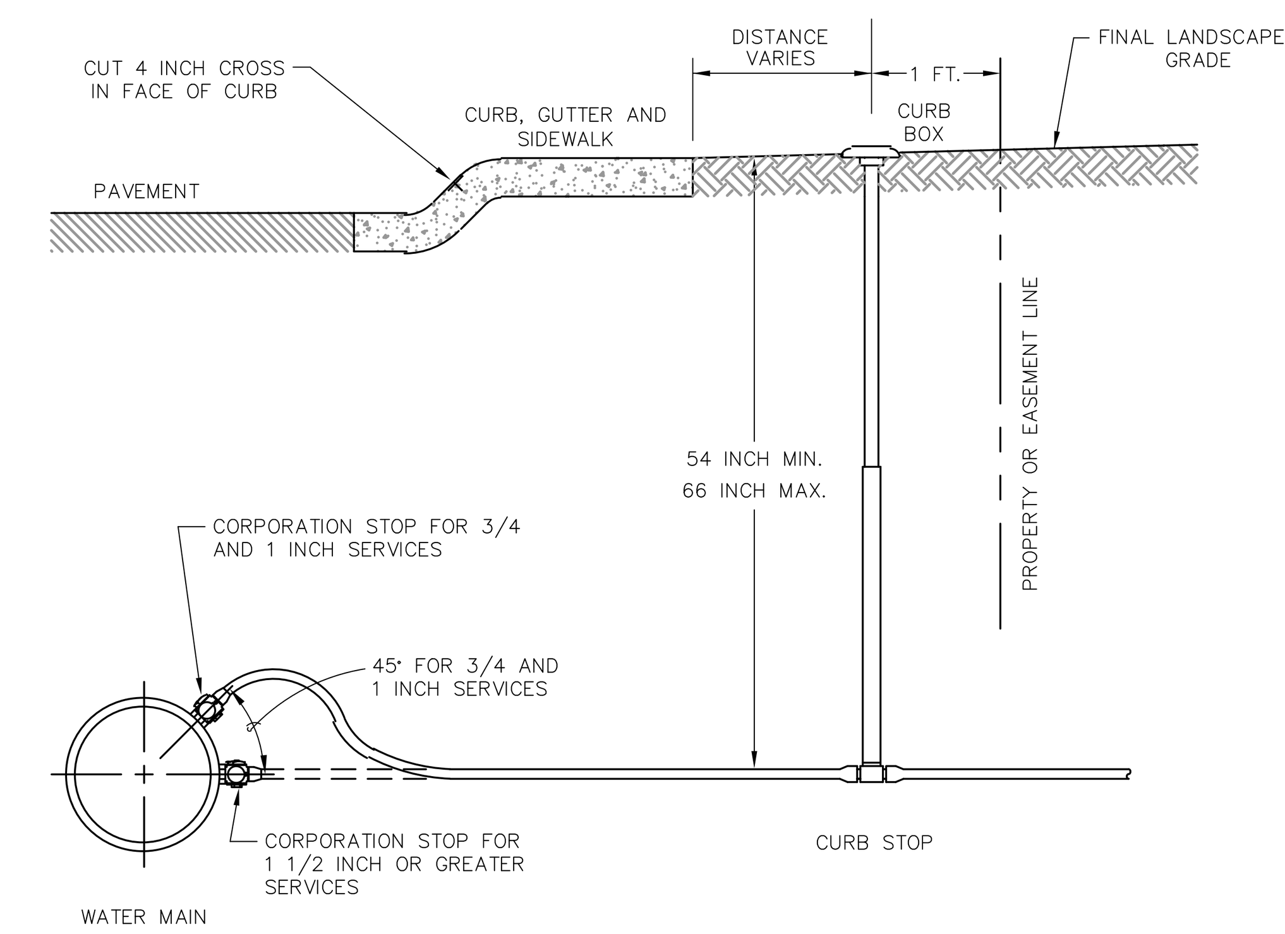
NOTES

NO LANDSCAPING (TREES, SCRUBS, BOULDERS, ETC.), RETAINING WALLS OR FENCES ALLOWED WITHIN 4 FEET OF FIRE HYDRANT.

FIRE HYDRANT PIPING, VALVES, ETC. SHALL BE WRAPPED IN POLYETHYLENE.

CITY OF FORT COLLINS UTILITIES – WATER FIELD OPERATIONS P.O. BOX 580 FORT COLLINS, CO. 80550 (970) 221-6700 | TITLE OF DRAWING: FIRE HYDRANT INSTALLATION | REVISED DATE: 4/8/11 | DETAIL 3

102 D1 FIRE HYDRANT INSTALLATION — NOT TO SCALE

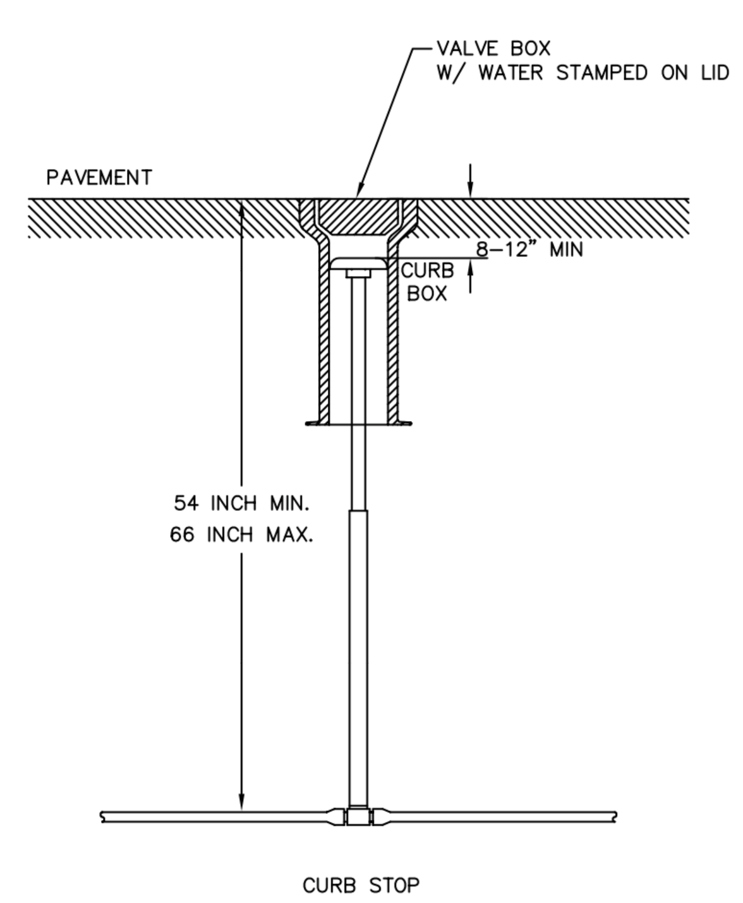


GENERAL NOTES

1. Use direct tap (as shown) for 3/4 inch and 1 inch services unless water main is PVC, in which case, use a tapping saddle.
2. Install 1 1/2 inch and 2 inch services with tapped tee and corporation stop at time of construction or use a tapping saddle.
3. Locate curb box and meter pit according to the approved utility drawings.
4. The City is responsible for maintaining the water main, corporation stop, and service piping up to and including the curb stop. The owner is responsible for service from the curb stop, including the outlet coupling to the building.
5. No couplings allowed between curb stop and meter setting.
6. Use type K copper for the service from the corporation stop to a minimum of 5 feet past the meter pit.
7. No landscaping (shrubs, boulders, etc.), retaining walls or fences allowed within 4 feet of the curb stop and meter pit, and no trees within 10 feet of curb and meter pit.
8. All residential water service shall be installed in the center of the lot unless otherwise approved by the Utility.
9. All water and sanitary sewer service shall have a minimum horizontal separation of ten feet.

CITY OF FORT COLLINS UTILITIES – WATER FIELD OPERATIONS P.O. BOX 580 FORT COLLINS, CO. 80550 (970) 221-6700 | TITLE OF DRAWING: TYPICAL WATER SERVICE | REVISED DATE: 4/12/11 | DETAIL 11

103 D1 TYPICAL WATER SERVICE — NOT TO SCALE

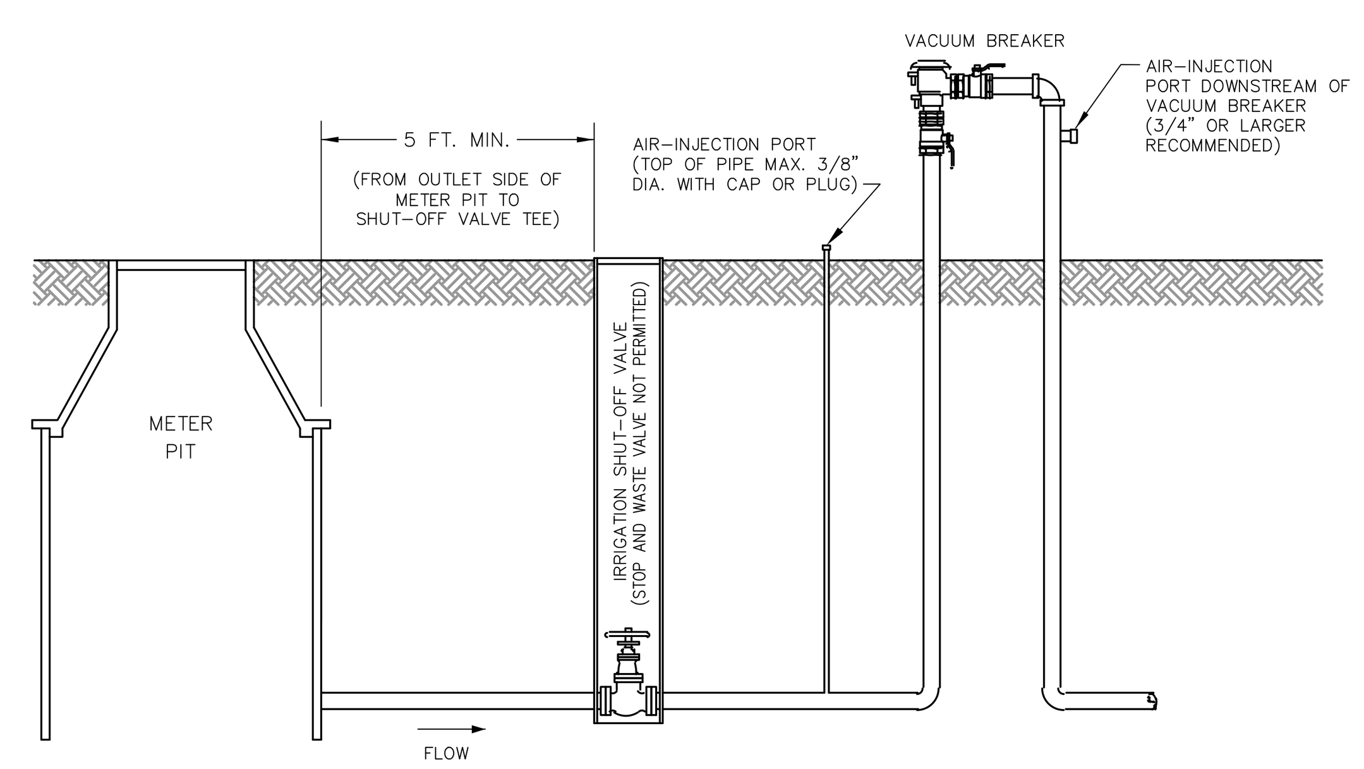


GENERAL NOTES

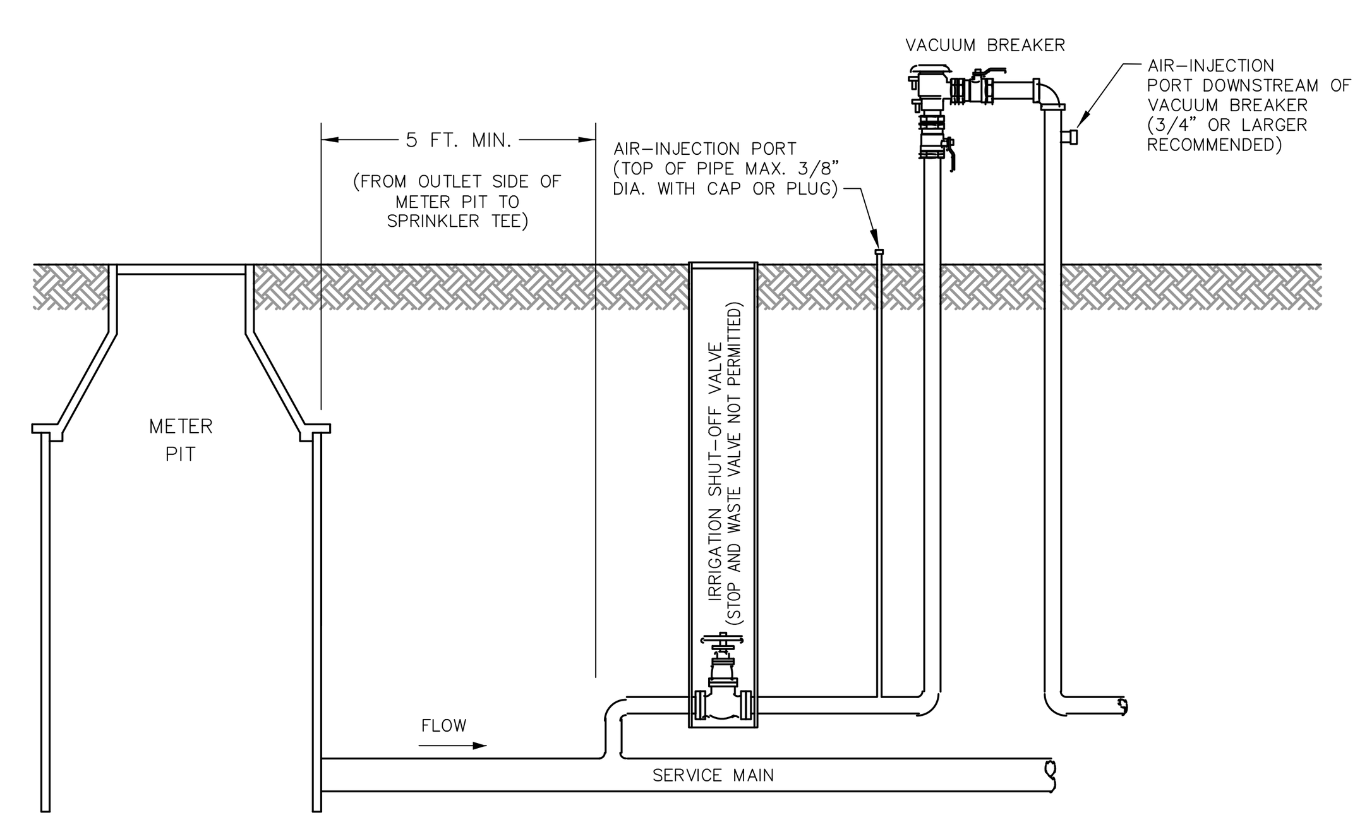
1. Locate curb box and water meter according to the approved utility drawings.
2. Compact trench as required by Development Construction Standard to support valve box.

CITY OF FORT COLLINS UTILITIES – WATER FIELD OPERATIONS P.O. BOX 580 FORT COLLINS, CO. 80550 (970) 221-6700 | TITLE OF DRAWING: TRAFFIC-RATED CURB STOP INSTALLATION | REVISED DATE: 7/17/2014 | DETAIL 11A

104 D1 TRAFFIC-RATED CURB STOP INSTALLATION — NOT TO SCALE



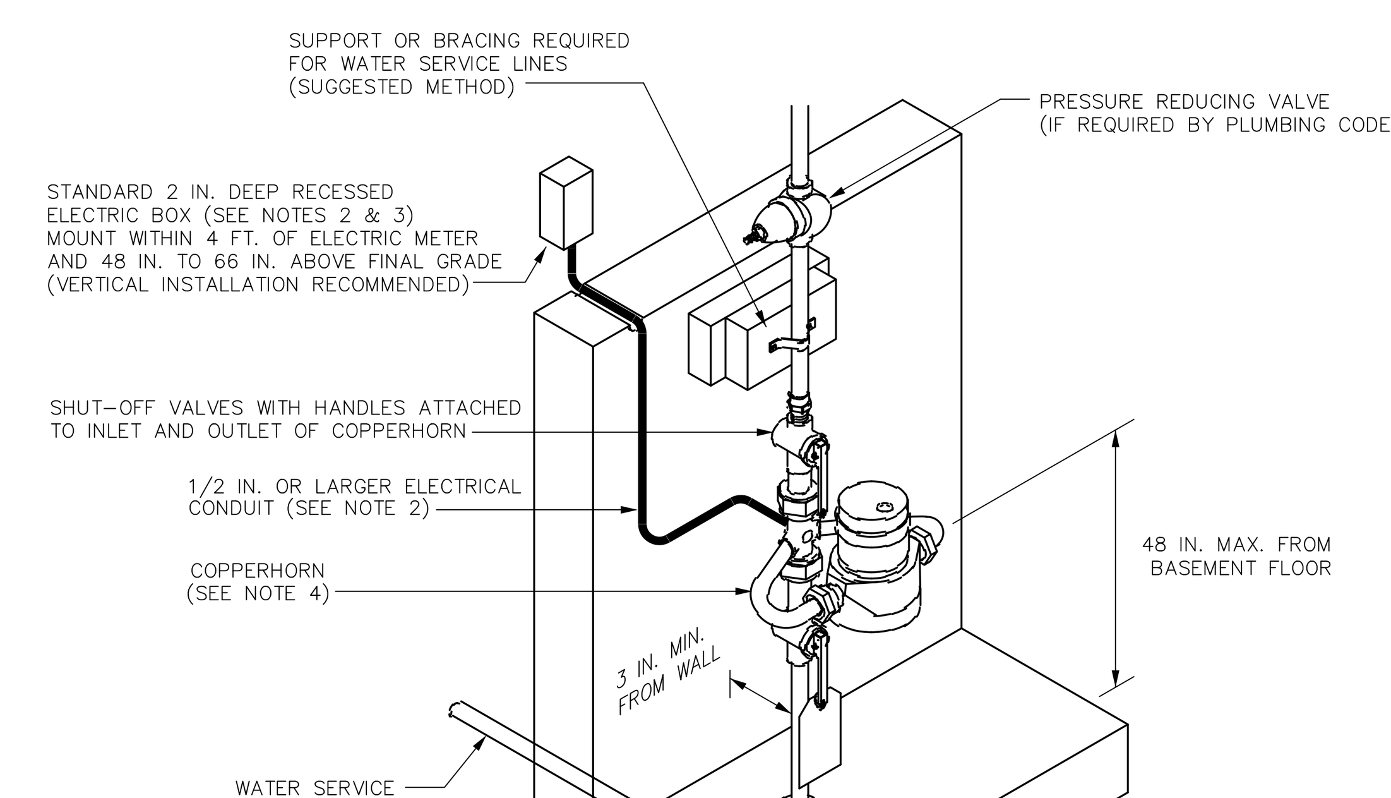
DESIGNATED SPRINKLER SERVICE



SPRINKLER TAP OFF DOMESTIC SERVICE

CITY OF FORT COLLINS UTILITIES – WATER FIELD OPERATIONS P.O. BOX 580 FORT COLLINS, CO. 80550 (970) 221-6700 | TITLE OF DRAWING: SPRINKLER SYSTEM DETAIL | REVISED DATE: 4/11/11 | DETAIL 13

105 D1 SPRINKLER SYSTEM DETAIL — NOT TO SCALE



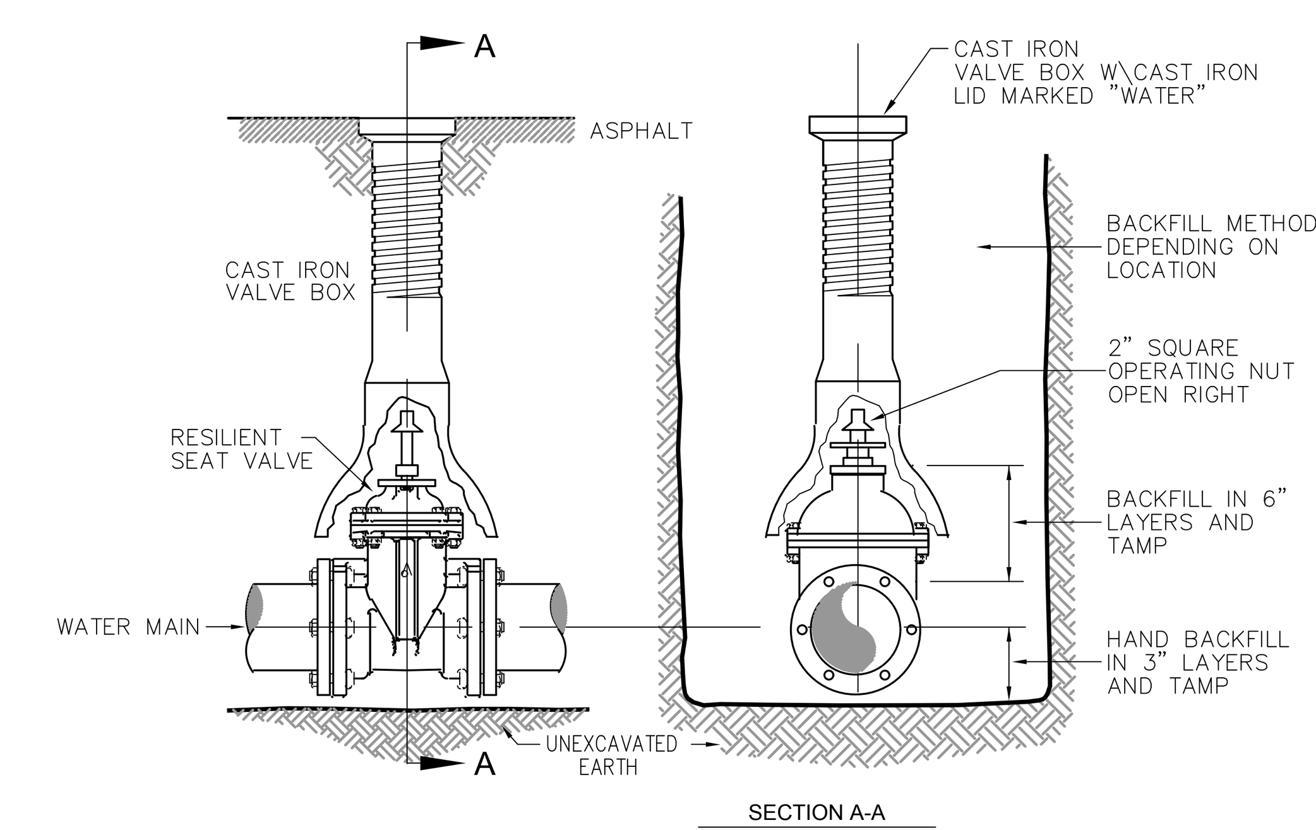
NOT TO SCALE

GENERAL NOTES:

1. PROVIDE CLEAR AND UNOBSTRUCTED 2 FT. BY 2 FT. MINIMUM ACCESS TO THE COPPERHORN AND SHUTOFF VALVES.
2. ELECTRICAL CONDUIT WILL BE 1/2 INCH OR LARGER ELECTRICAL METALLIC TUBING ONLY, INSTALLED IN CONFORMANCE WITH ARTICLES 347 AND 348 OF THE CURRENT NATIONAL ELECTRIC CODE. CONDUIT MAY NOT EXTEND MORE THAN 75 FEET BETWEEN JUNCTION BOXES. CONDUIT WILL BE CONNECTED TO A RECESSED EXTERIOR ELECTRICAL BOX MOUNTED WITHIN 1 FOOT OF THE FRONT CORNER OF THE STRUCTURE ON THE SAME SIDE AS THE ELECTRIC METER AND TERMINATED WITHIN 6 INCHES OF THE COPPERHORN. NO FLEXIBLE PVC CONDUIT ALLOWED.
3. ALL JUNCTION BOXES MUST BE INSTALLED NO MORE THAN 96 INCHES ABOVE THE FLOOR AND HAVE OPEN ACCESS.
4. COPPERHORNS WILL BE INSTALLED SO THAT METERS ARE IN A HORIZONTAL POSITION.
5. A SECURE SUPPORT IS REQUIRED FOR COPPERHORNS.
6. JUNCTION BOXES SHALL NOT BE INSTALLED IN ATTICS OR CRAWL SPACES.
7. METERS SHALL NOT BE INSTALLED IN CRAWL SPACES.

CITY OF FORT COLLINS UTILITIES – WATER FIELD OPERATIONS P.O. BOX 580 FORT COLLINS, CO. 80550 (970) 221-6700 | TITLE OF DRAWING: STANDARD INTERIOR SETTING FOR 3/4 IN. AND 1 IN. WATER METERS | REVISED DATE: 4/11/11 | DETAIL 14

106 D1 STANDARD INTERIOR WATER METER — NOT TO SCALE



ALL VALVES TO BE RESILIENT SEAT, EPOXY COATED INSIDE AND OUT PER CITY OF FORT COLLINS AND AWWA SPECS.

ALL VALVE BOXES TO BE OF CAST IRON CONSTRUCTION, TWO PIECE THREADED ADJUSTABLE DESIGN PER CITY OF FORT COLLINS SPECS.

ALL VALVES TO BE 8 MIL POLY WRAPPED. T-BOLTS, NUTS AND RODS TO BE TAR COATED BEFORE WRAPPED.

107 D1 VALVE ASSEMBLY BOX — NOT TO SCALE

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City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED:	City Engineer	Date
CHECKED BY:	Water & Wastewater Utility	Date
CHECKED BY:	Stormwater Utility	Date
CHECKED BY:	Parks & Recreation	Date
CHECKED BY:	Traffic Engineer	Date
CHECKED BY:	Environmental Planner	Date

No. | Revisions: | By: | Date:

REVIEW SET NOT FOR CONSTRUCTION 02/11/15

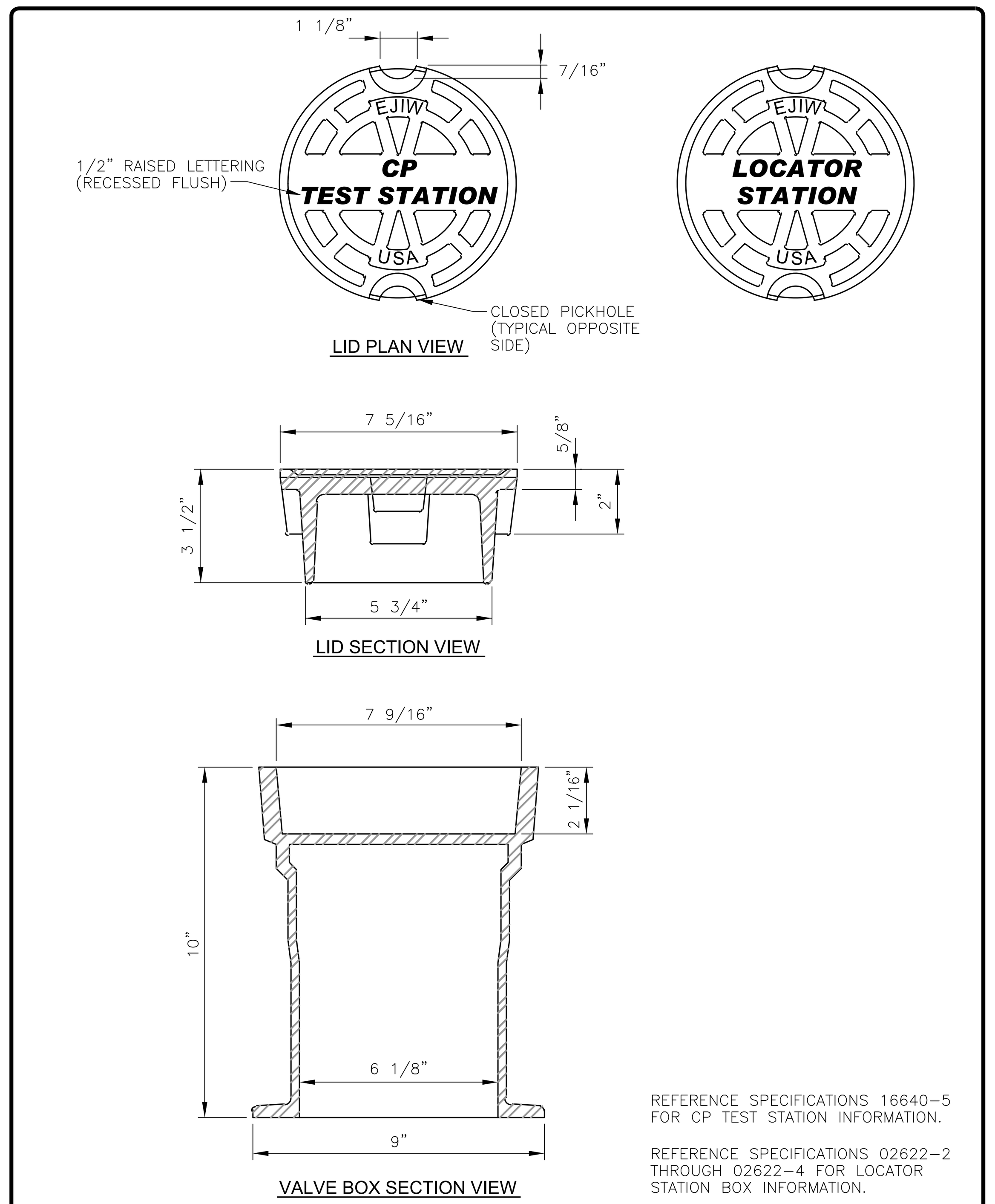
These drawings are instruments of service provided by Northern Engineering Services, Inc. and are not to be used for any type of construction unless signed and sealed by a Professional Engineer in the employ of Northern Engineering Services, Inc.

NORTHERN ENGINEERING
301 North Howes Street, Suite 100 Fort Collins, Colorado 80521
PHONE: 970.221.4158 www.northernengineering.com

PROJECT: 820-004 | DATE: February 11, 2015
DESIGNED BY: A. Reese | SCALE: N/A
DRAWN BY: B. Ruch | REVIEWED BY: N. Haws

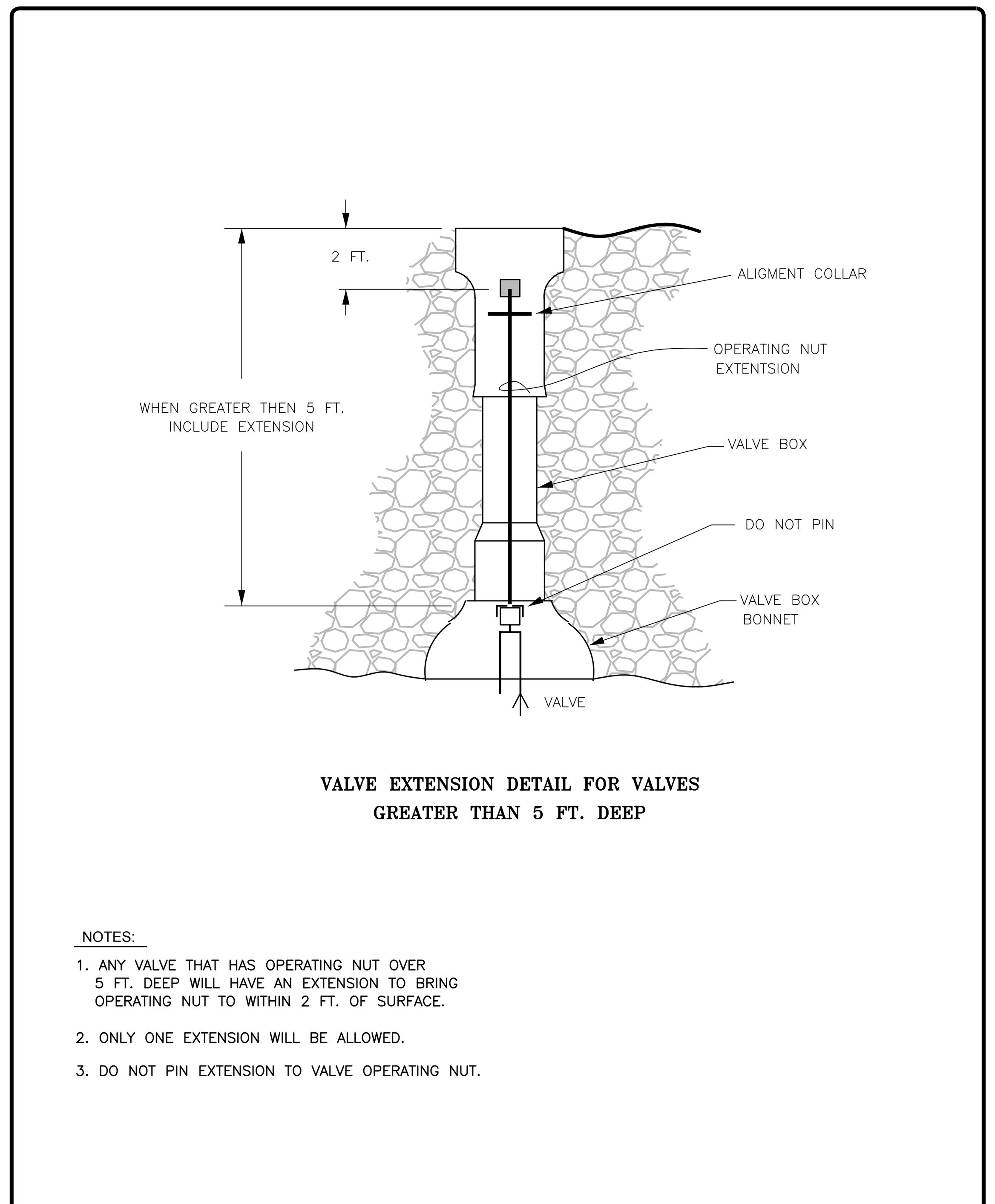
HILL POND RESIDENCES
UTILITY DETAILS

Sheet D1 Of 15 Sheets



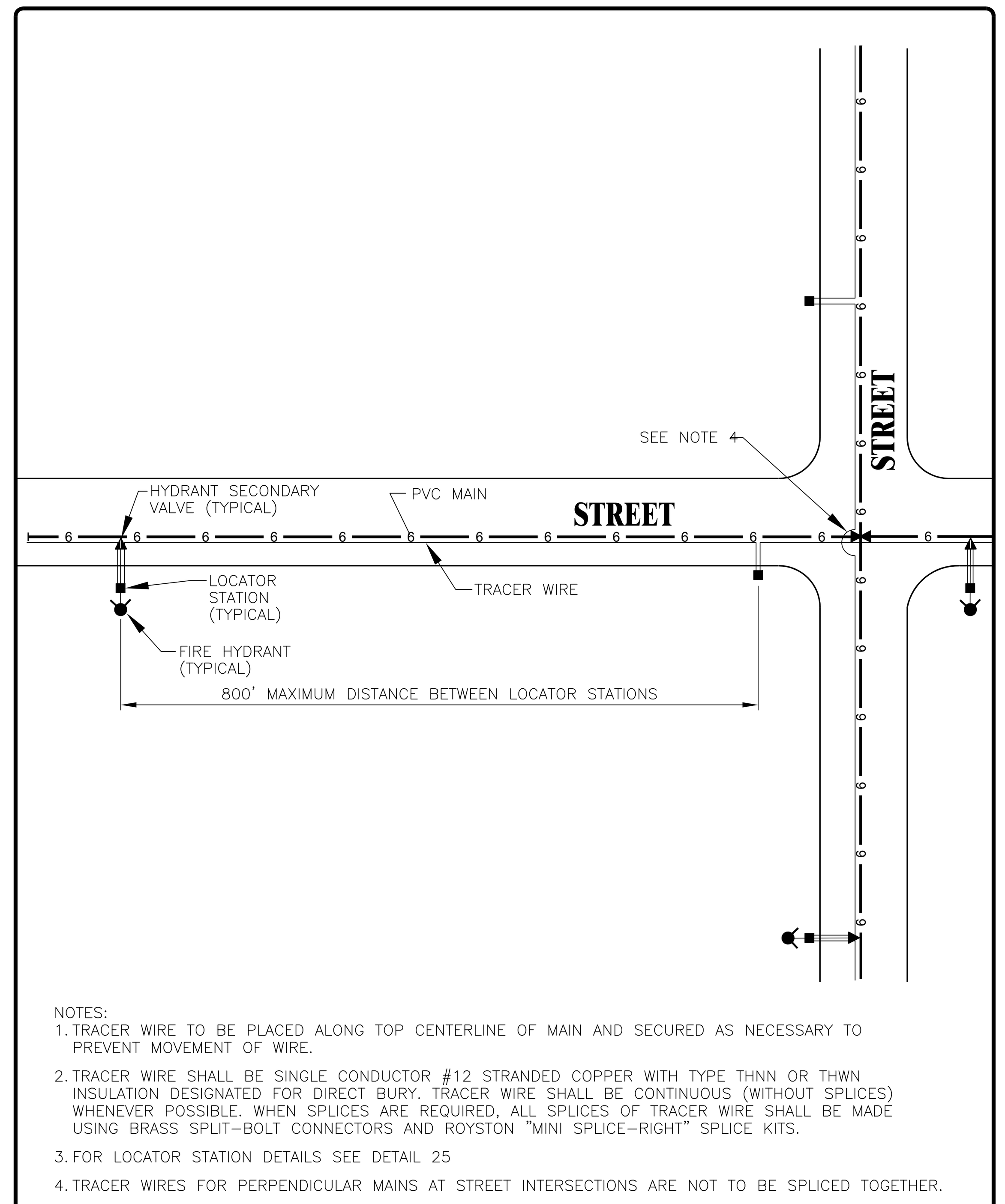
City of Fort Collins | CITY OF FORT COLLINS UTILITIES - WATER FIELD OPERATIONS P.O. BOX 580 FORT COLLINS, CO. 80550 (970) 221-6700 | TITLE OF DRAWING: CP TEST AND LOCATOR STATION BOX | REVISED DATE: 4/11/11 | DETAIL 25

200 D2 CP TEST AND LOCATOR STATION BOX — NOT TO SCALE



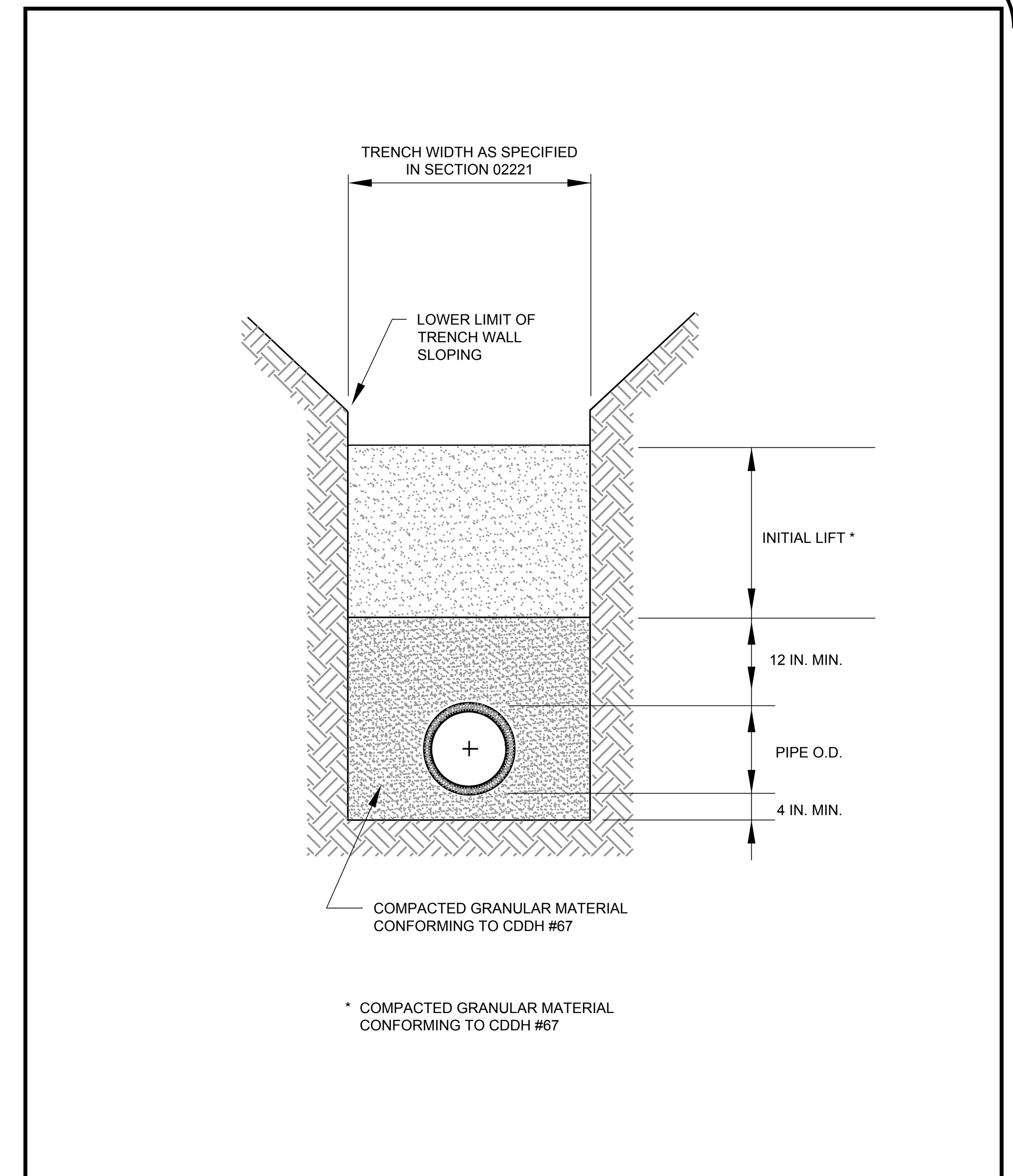
City of Fort Collins | CITY OF FORT COLLINS UTILITIES - WATER FIELD OPERATIONS P.O. BOX 580 FORT COLLINS, CO. 80550 (970) 221-6700 | TITLE OF DRAWING: VALVE EXTENSION DETAILS | REVISED DATE: 4/11/11 | DETAIL 29

201 D2 VALVE EXTENSION — NOT TO SCALE



City of Fort Collins | CITY OF FORT COLLINS UTILITIES - WATER FIELD OPERATIONS P.O. BOX 580 FORT COLLINS, CO. 80550 (970) 221-6700 | TITLE OF DRAWING: PVC WATER MAIN TRACER WIRE DETAIL | REVISED DATE: 4/11/11 | DETAIL 30

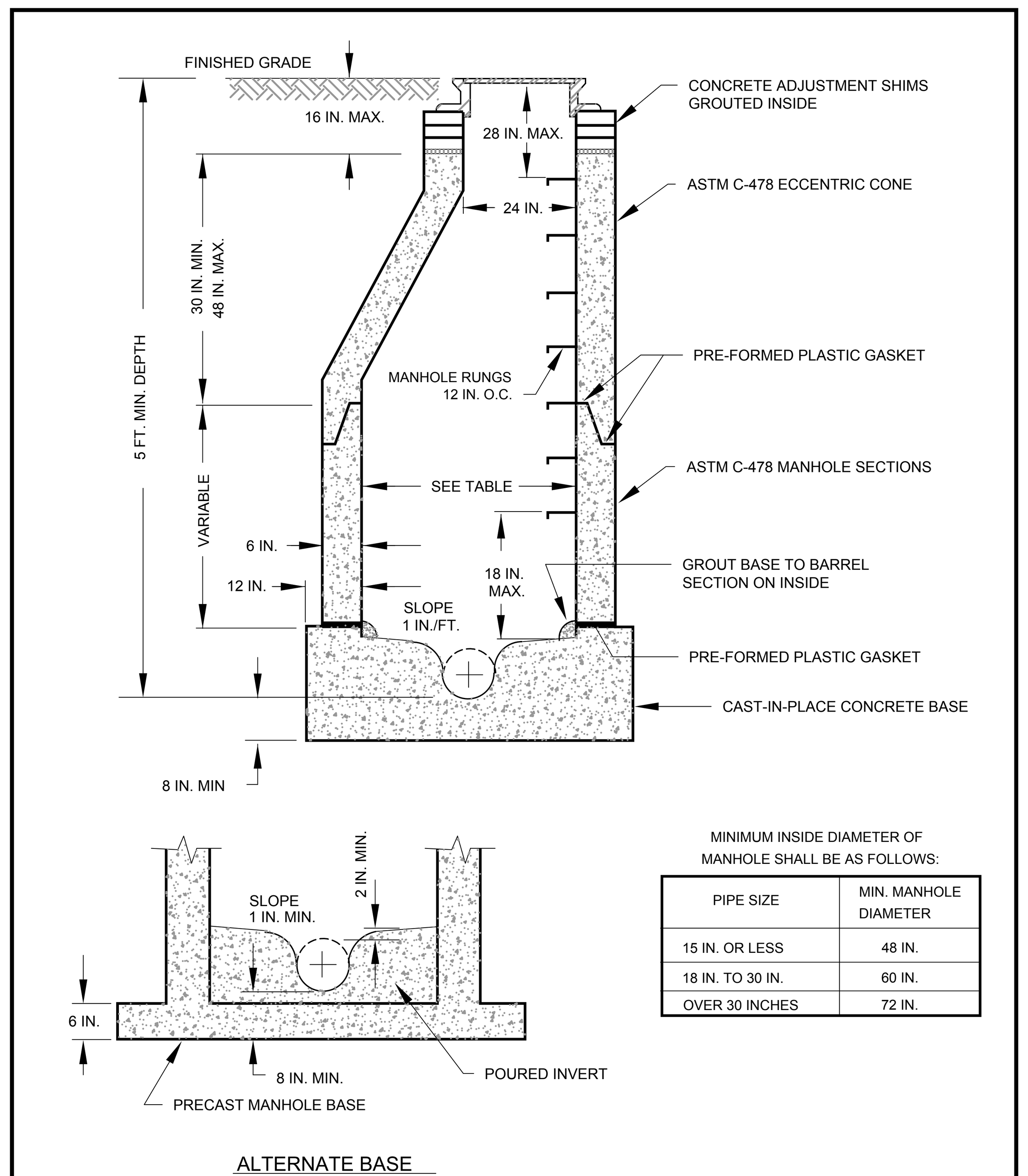
202 D2 PVC WATER MAIN TRACER WIRE — NOT TO SCALE



BEDDING REQUIRMENTS

City of Fort Collins | SEWER CONSTRUCTION DETAILS | APPROVED: / DATE REVISED: 4/11/11 / DRAWN BY: NBJ | DETAIL WW-1

203 D2 BEDDING REQUIRMENTS — NOT TO SCALE



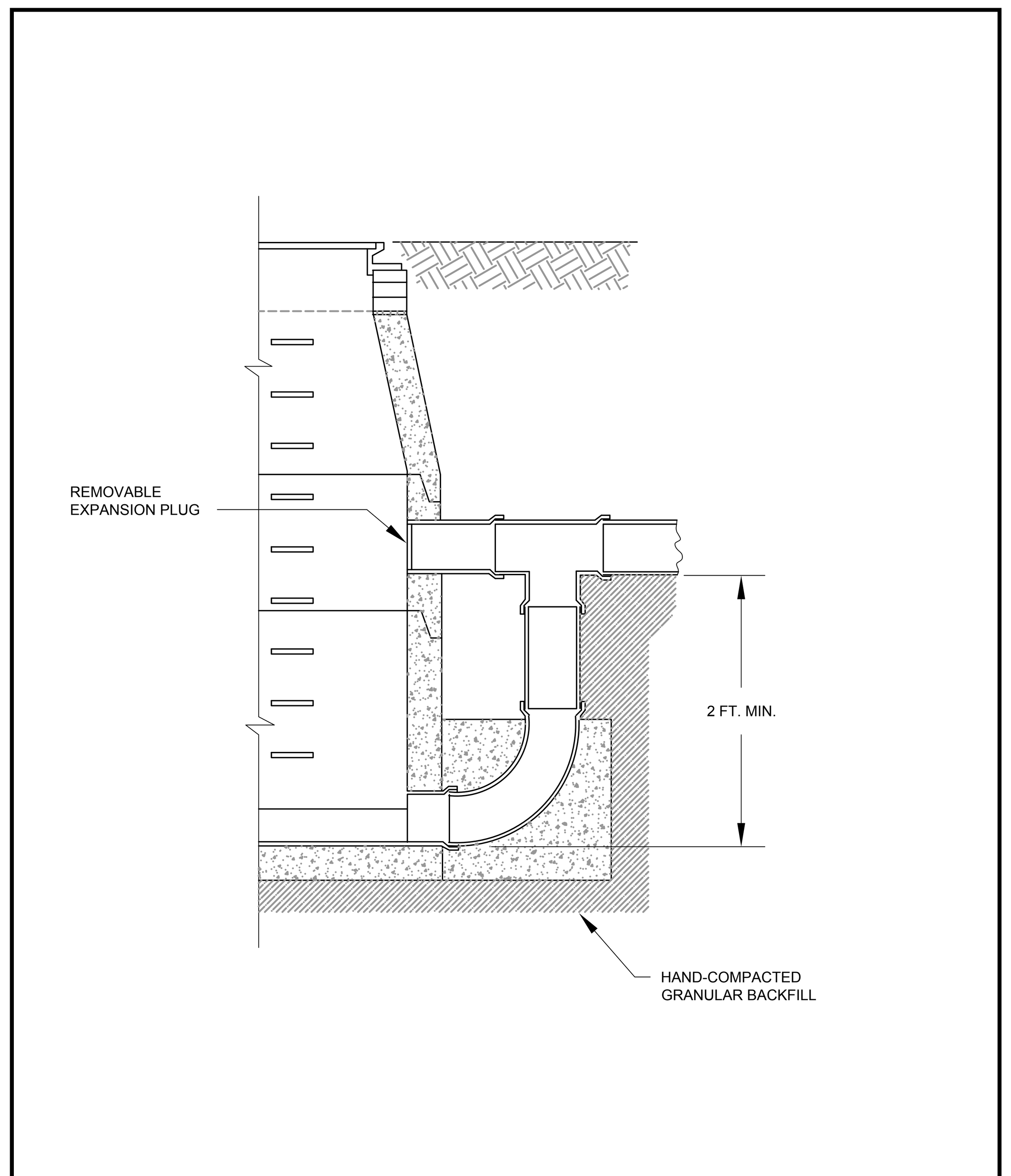
MINIMUM INSIDE DIAMETER OF MANHOLE SHALL BE AS FOLLOWS:

PIPE SIZE	MIN. MANHOLE DIAMETER
15 IN. OR LESS	48 IN.
18 IN. TO 30 IN.	60 IN.
OVER 30 INCHES	72 IN.

STANDARD MANHOLE

City of Fort Collins | SEWER CONSTRUCTION DETAILS | APPROVED: / DATE REVISED: 4/11/11 / DRAWN BY: NBJ | DETAIL WW-3

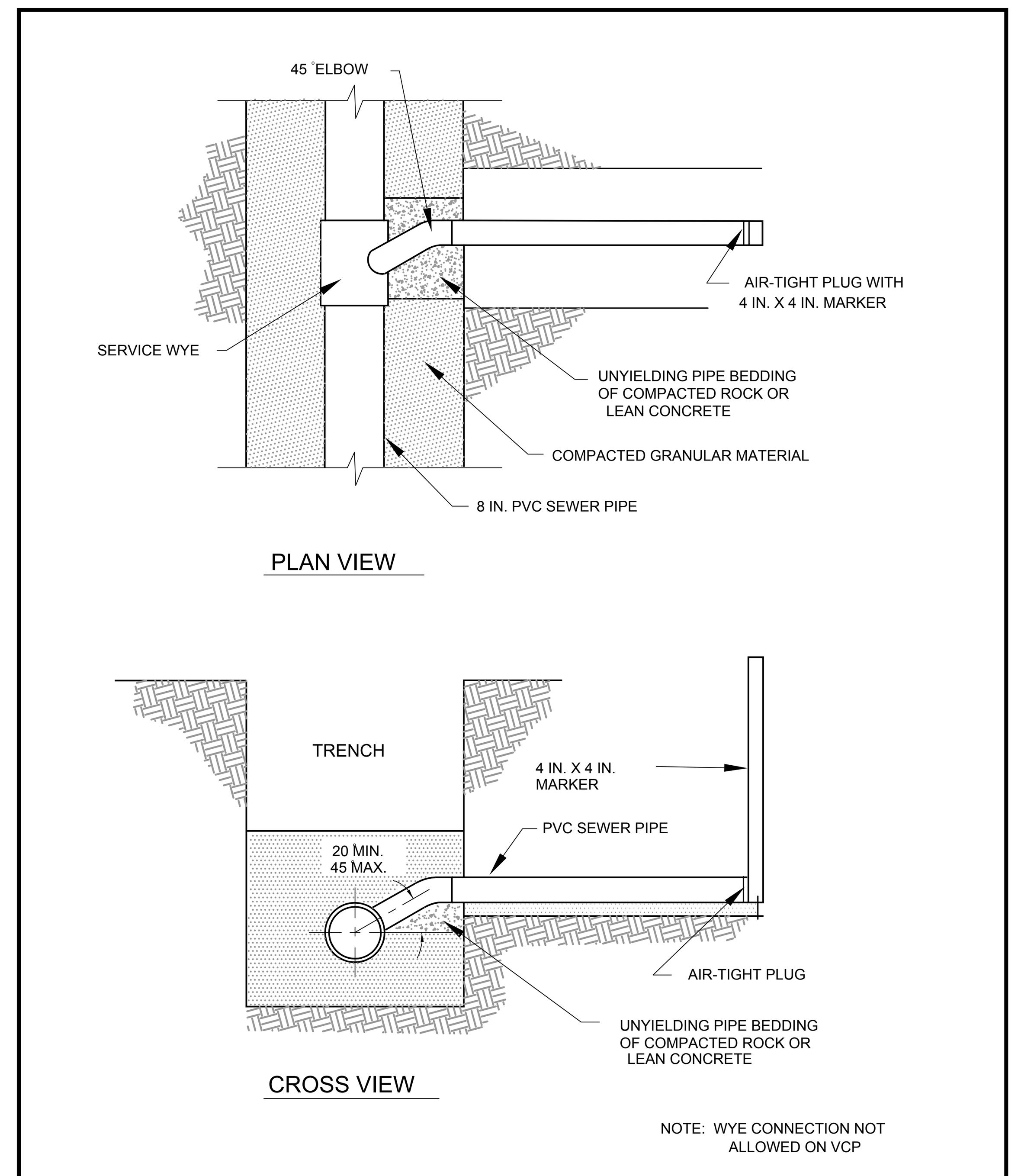
204 D2 STANDARD MANHOLE — NOT TO SCALE



DROP MANHOLE

City of Fort Collins | SEWER CONSTRUCTION DETAILS | APPROVED: / DATE REVISED: 4/11/11 / DRAWN BY: NBJ | DETAIL WW-4

205 D2 DROP MANHOLE — NOT TO SCALE



SERVICE WYE DETAIL

City of Fort Collins | SEWER CONSTRUCTION DETAILS | APPROVED: / DATE REVISED: 4/11/11 / DRAWN BY: NBJ | DETAIL WW-9

206 D2 SERVICE WYE — NOT TO SCALE

CALL UTILITY NOTIFICATION CENTER OF COLORADO

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City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED: ______ City Engineer ______ Date
CHECKED BY: ______ Water & Wastewater Utility ______ Date
CHECKED BY: ______ Stormwater Utility ______ Date
CHECKED BY: ______ Parks & Recreation ______ Date
CHECKED BY: ______ Traffic Engineer ______ Date
CHECKED BY: ______ Environmental Planner ______ Date

No. | Revisions: | By: | Date:

REVIEW SET
NOT FOR CONSTRUCTION
02/11/15

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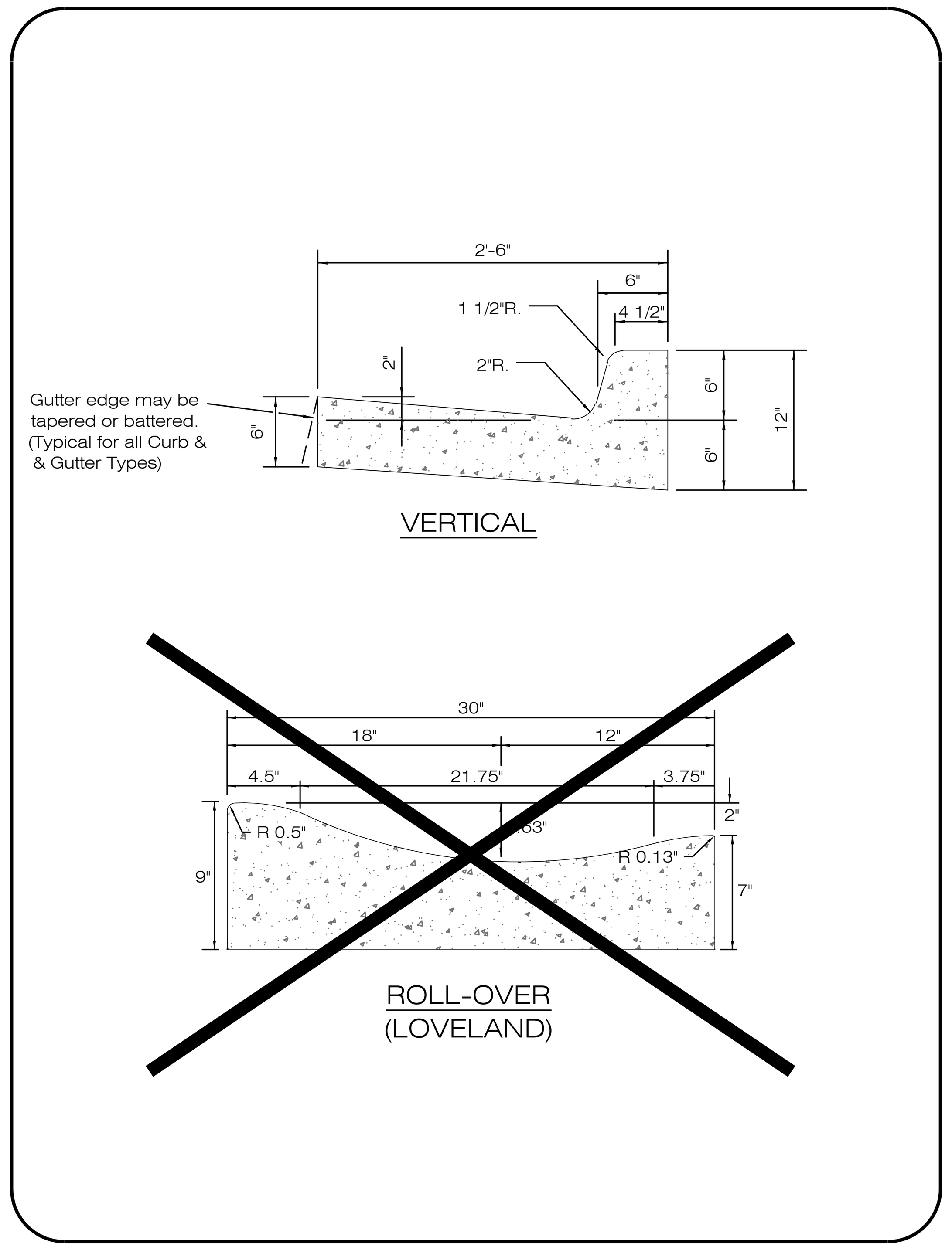
NORTHERN ENGINEERING
PHONE: 970.221.4158
www.northernengineering.com
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521

PROJECT: 820-004
DATE: February 11, 2015
DESIGNED BY: A. Reese
SCALE: N/A
DRAWN BY: B. Ruch
REVIEWED BY: N. Haws

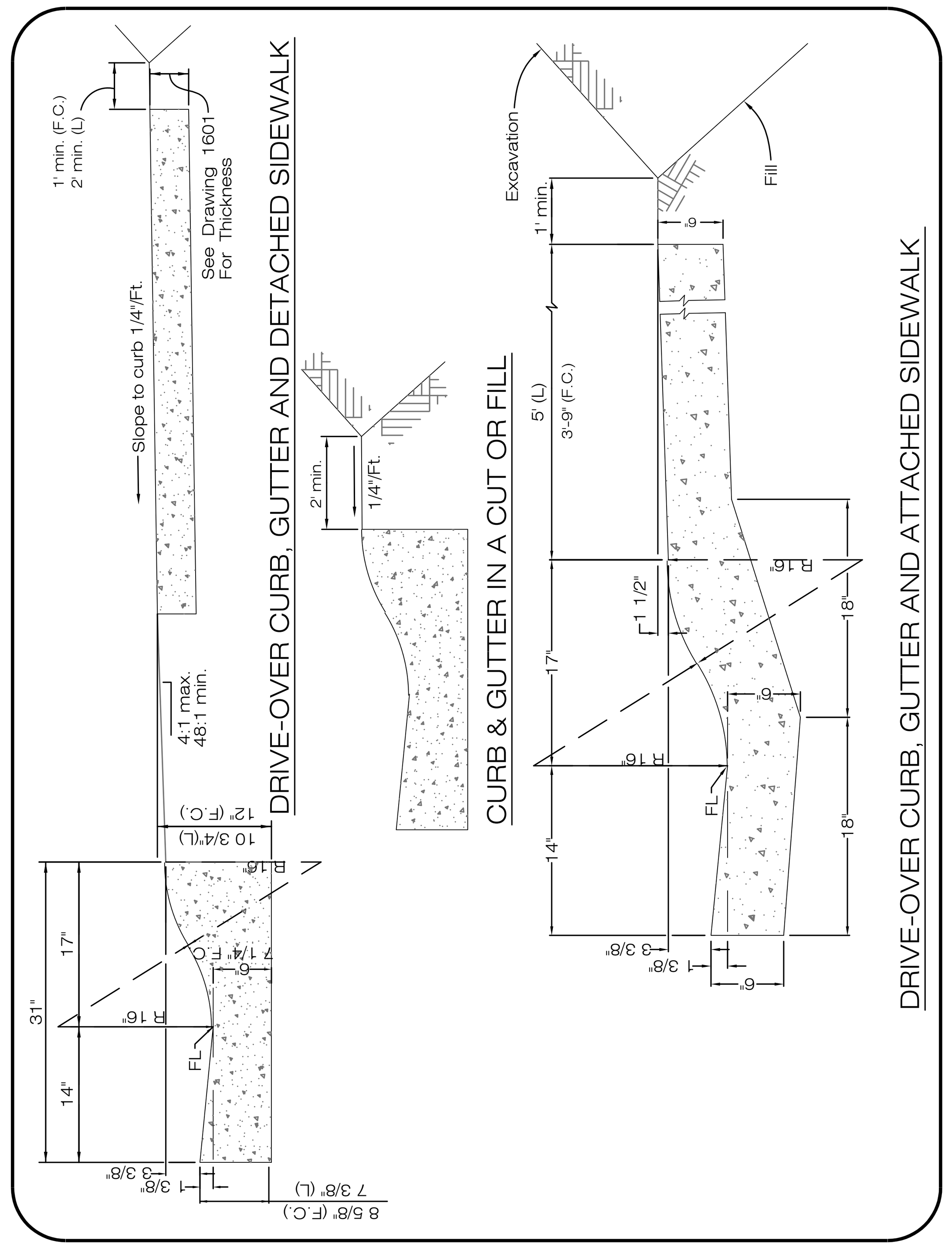
HILL POND RESIDENCES
UTILITY DETAILS

Sheet D2
Of 15 Sheets



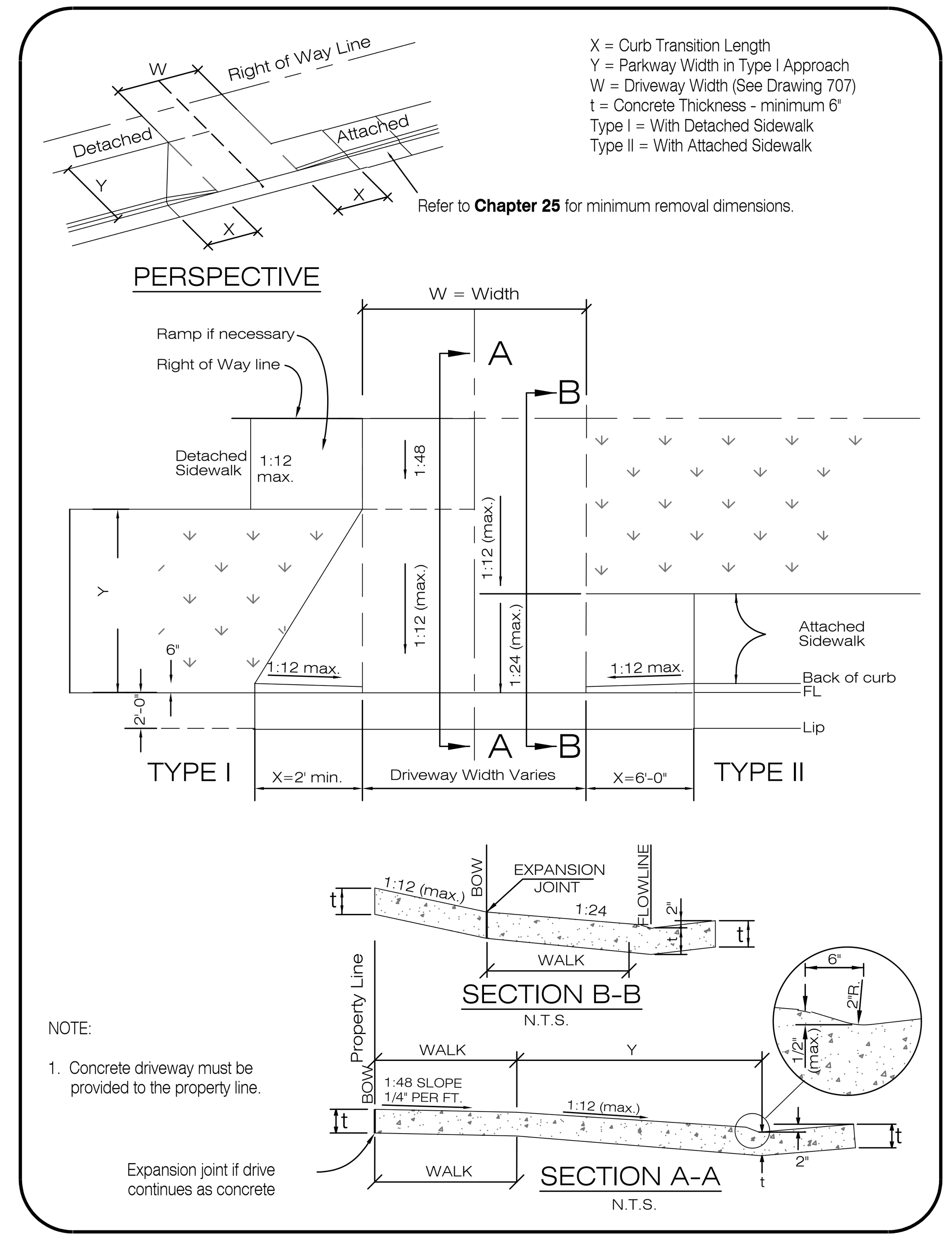
CURB AND GUTTER			
LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 1	DRAWING
		DATE: 03/01/02	701

300 / D3 — CURB AND GUTTER — NOT TO SCALE



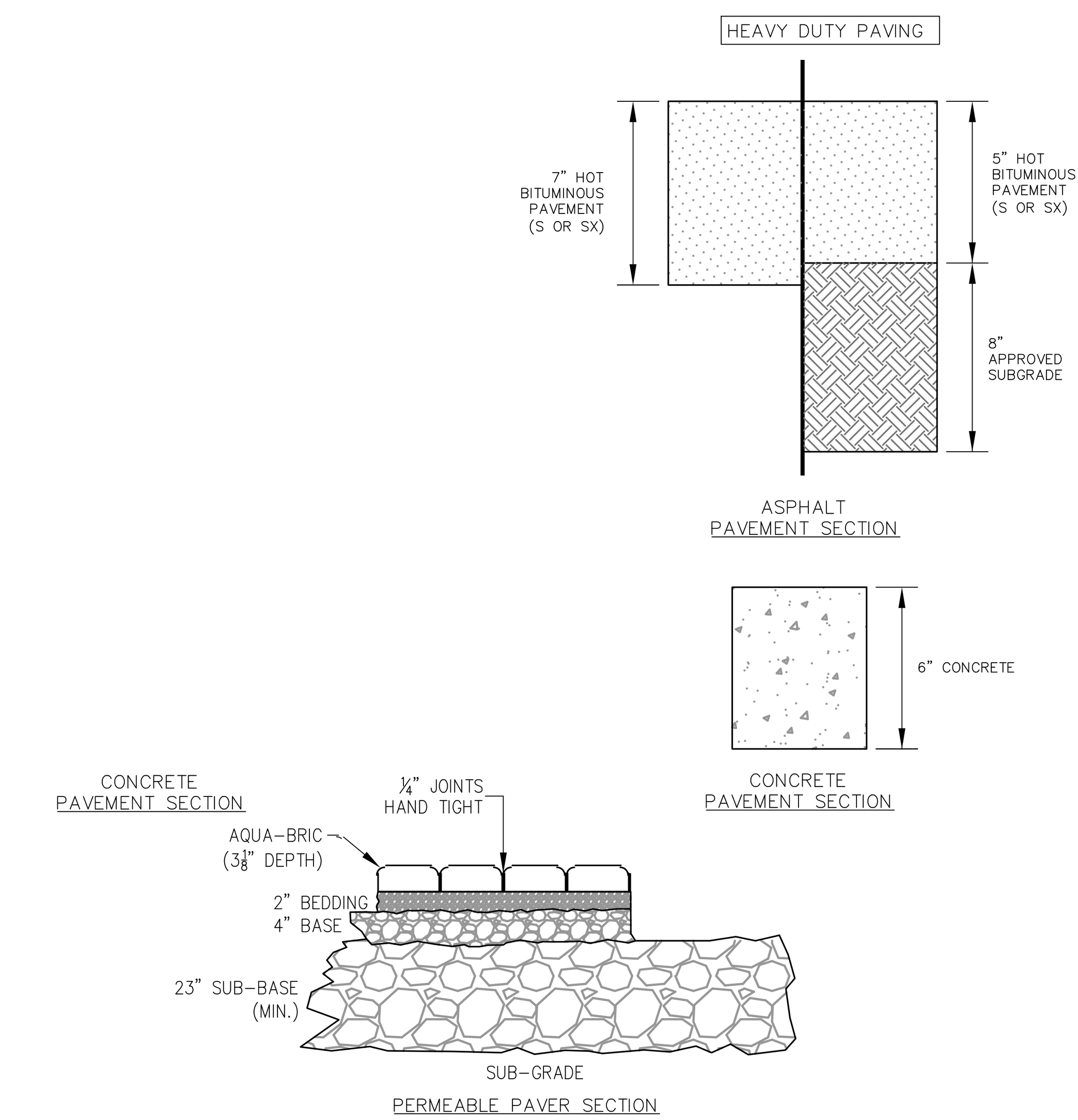
CURB AND GUTTER/SIDEWALK			
LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 1	DRAWING
		DATE: 03/01/02	702

301 / D3 — CURB AND GUTTER / SIDEWALK — NOT TO SCALE



STANDARD DRIVEWAY APPROACH (TYPES I & II)			
LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 2	DRAWING
		DATE: 04/01/07	706

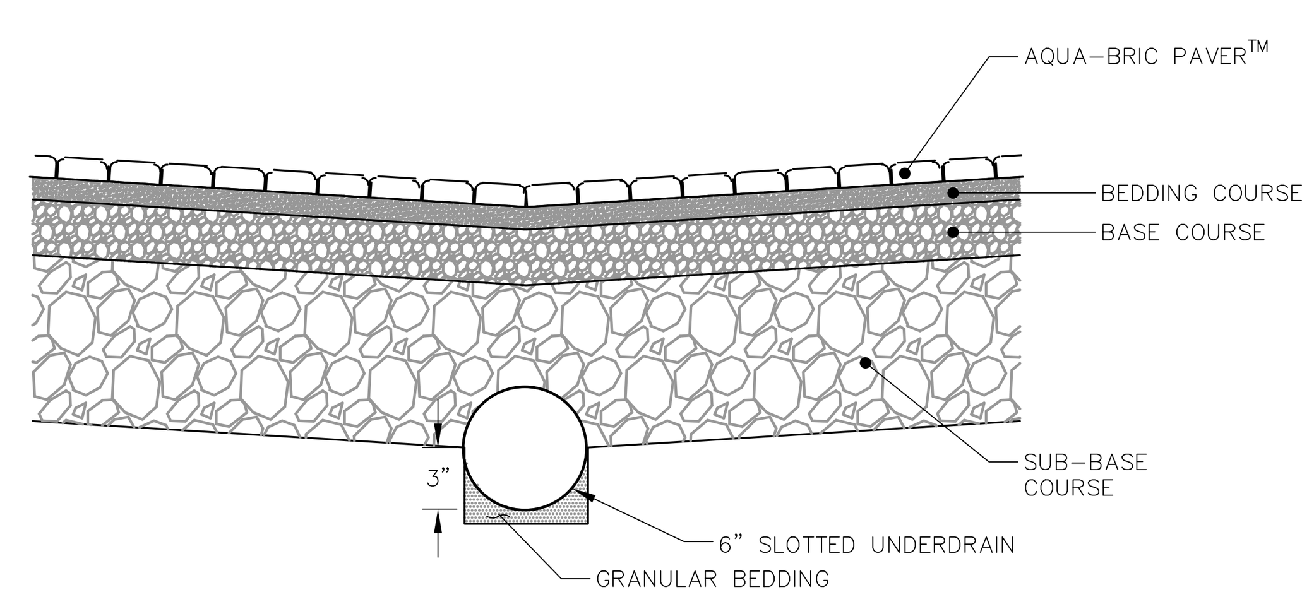
302 / D3 — STANDARD DRIVEWAY APPROACH (TYPES I & II) — NOT TO SCALE



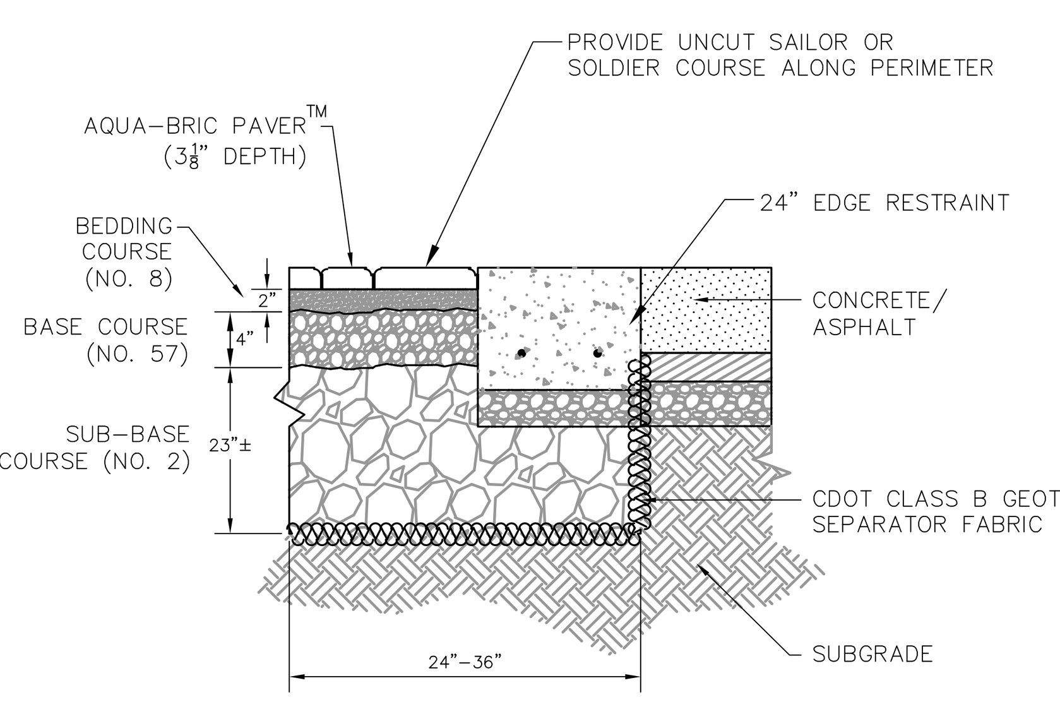
NOTES:

1. ALL SITE GRADING, SUBGRADE PREPARATION AND PAVING SHALL FOLLOW THE GEOTECHNICAL RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL ENGINEERING REPORT "CARRIAGE HOUSE APPARTMENTS". BY KUMAR & ASSOCIATES DATED DECEMBER 13, 2012 (PROJ. NO. 12-1-517), AND ANY SUBSEQUENT ADDENDA.
2. REFER TO PLANS BY OUTSIDE LA FOR ADDITIONAL HARDSCAPE INFORMATION.
3. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PAVER SECTION AND INSTALLATION. (NOTE: SECTION SHALL MEET THE SAME STRUCTURAL REQUIREMENTS AS 'HEAVY DUTY' ABOVE)
4. THE ENTIRE PERIMETER OF THE PERMEABLE PAVER AREAS SHALL RECEIVE SOME FORM OF EDGE RESTRAINT. FOLLOW MANUFACTURER'S RECOMMENDATIONS AND DETAILS ON THIS SHEET.
5. NOTE THAT THESE PAVING SECTIONS ARE TO BE USED ONLY FOR AREAS OUTSIDE OF PUBLIC RIGHT-OF-WAY. PAVING SECTIONS WITHIN PUBLIC RIGHT-OF-WAY WILL BE REQUIRED BY THE CITY OF FORT COLLINS TO BE PER AN APPROVED PAVEMENT DESIGN REPORT.

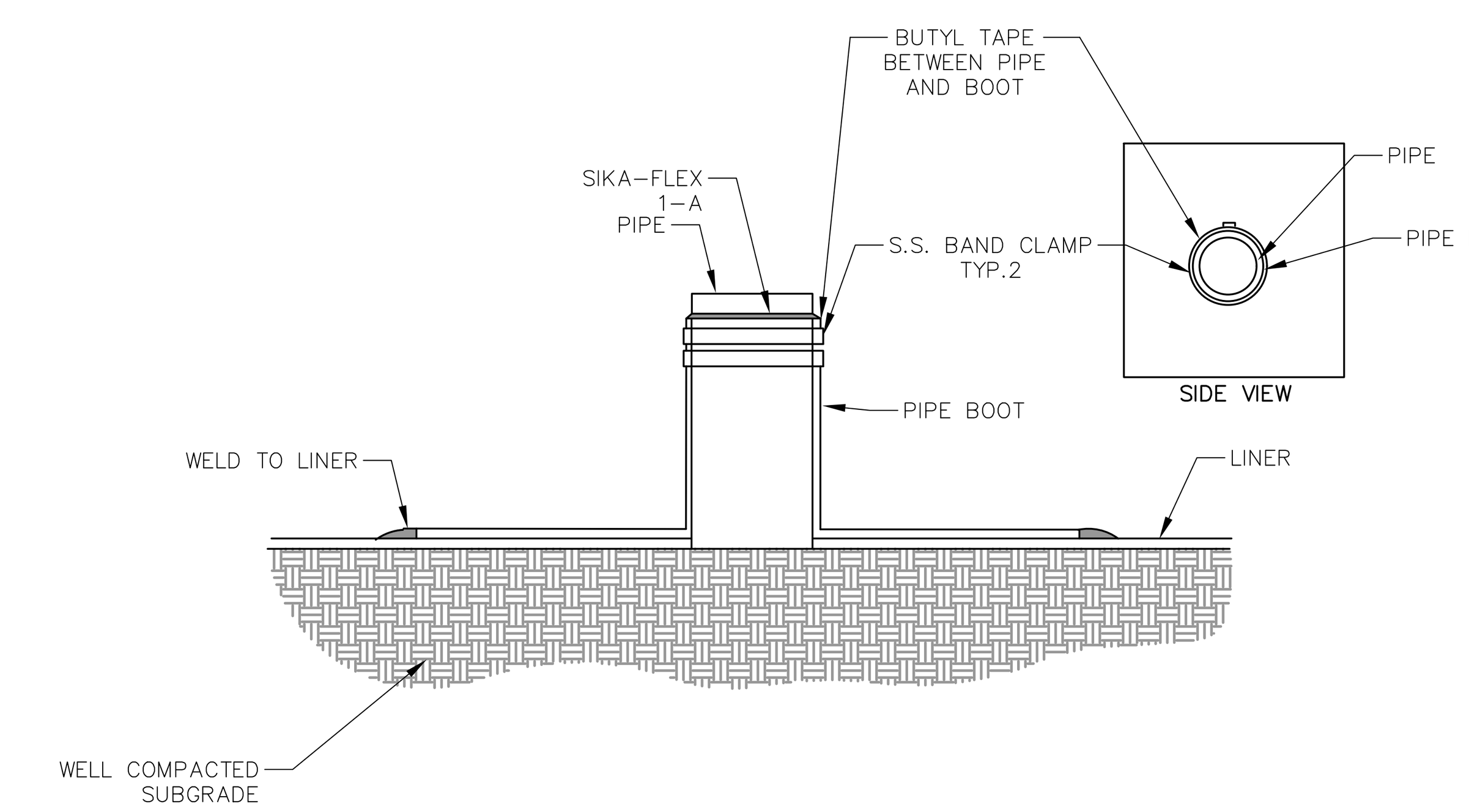
303 / D3 — PAVING SECTIONS (PRIVATE AREAS OUTSIDE ROW) — NOT TO SCALE



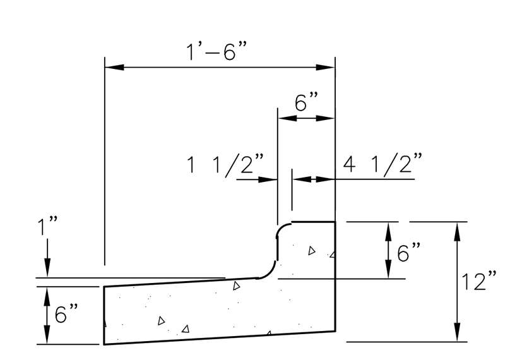
304 / D3 — PERMEABLE PAVER SECTION W/ UNDERDRAIN — NOT TO SCALE



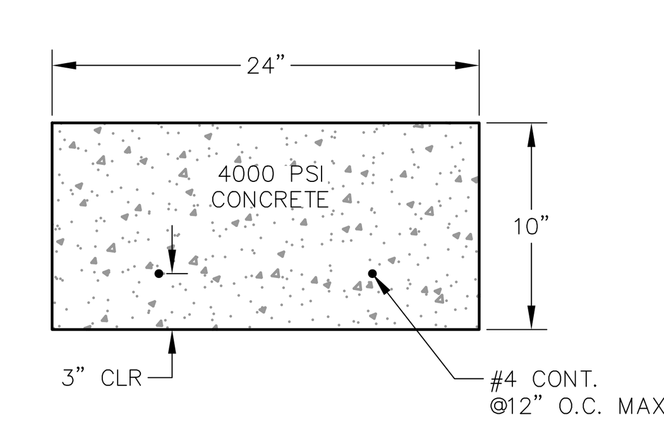
305 / D3 — PERMEABLE PAVER SECTION (ABUTTING PAVEMENT) — NOT TO SCALE



306 / D3 — PVC PIPE BOOT — NOT TO SCALE



307 / D3 — PRIVATE OUTFALL VERTICAL CURB & GUTTER — NOT TO SCALE



308 / D3 — PERMEABLE PAVER EDGE RESTRAINT — NOT TO SCALE

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CHECKED BY:	Environmental Planner	Date

No.	Revisions:	By:	Date:

REVIEW SET
NOT FOR CONSTRUCTION
02/11/15

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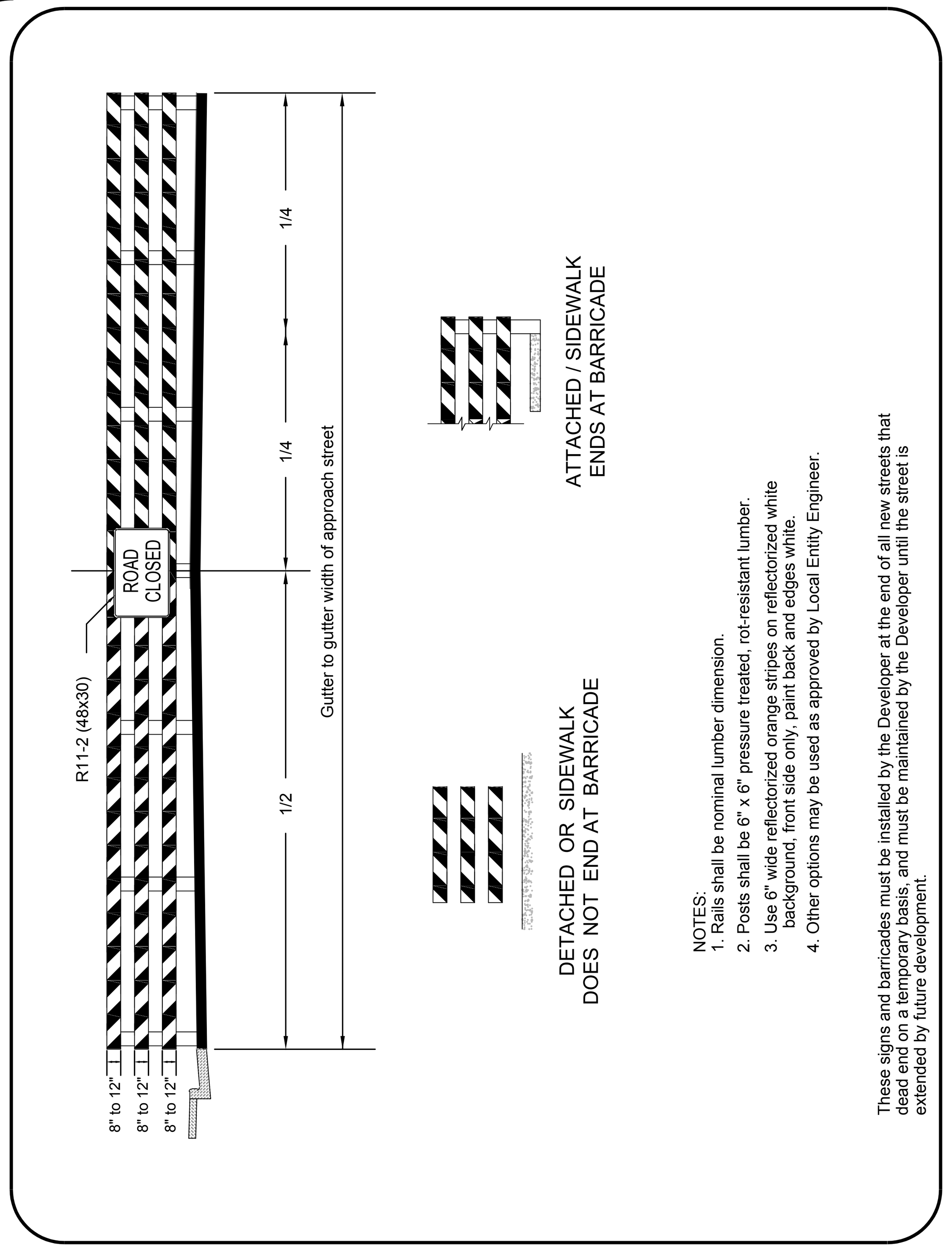
NORTHERN ENGINEERING
301 North Howes Street, Suite 010
Fort Collins, Colorado 80521
PHONE: 970.221.4158
www.northernengineering.com

PROJECT: 620-004	DESIGNED BY: A. Reese	DRAWN BY: B. Ruch
DATE: February 11, 2015	SCALE: N/A	REVIEWED BY: N. Haws

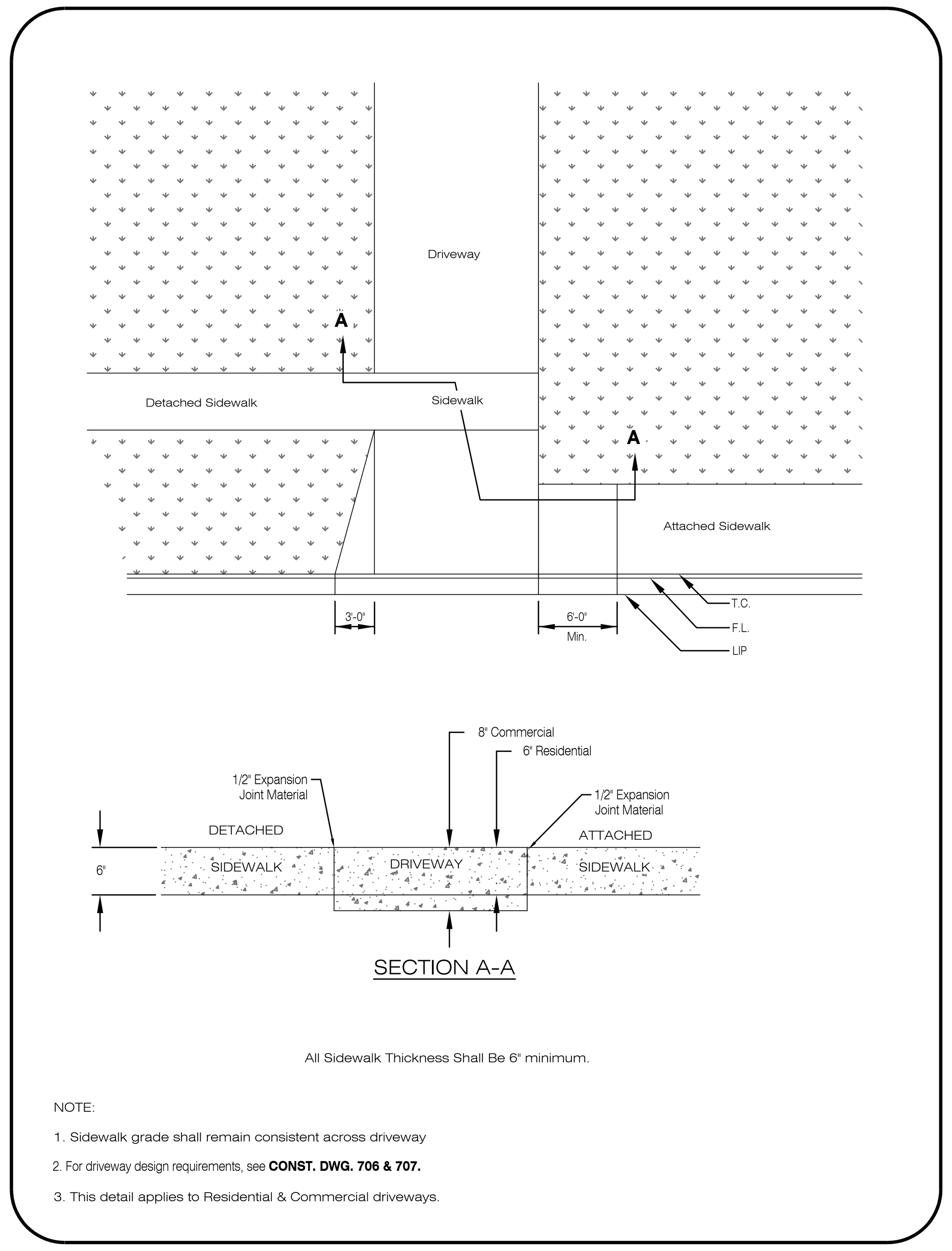
HILL POND RESIDENCES
SITE DETAILS

Sheet D3
Of 15 Sheets



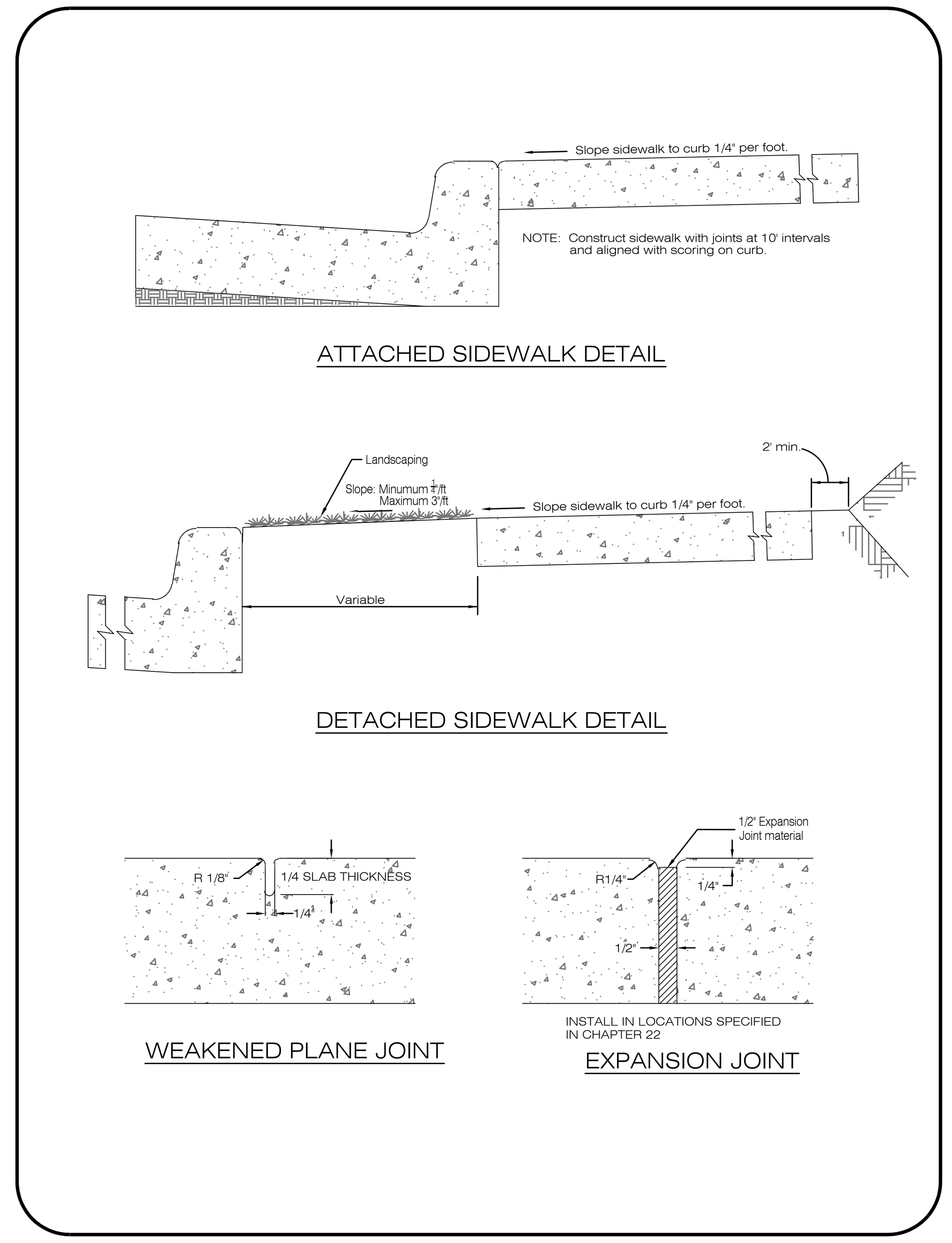
STANDARD TEMPORARY DEAD END BARRICADES			
LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 2 / DATE: 04/01/07	DRAWING 1413

400 D4 STANDARD TEMPORARY DEAD END BARRICADES
NOT TO SCALE



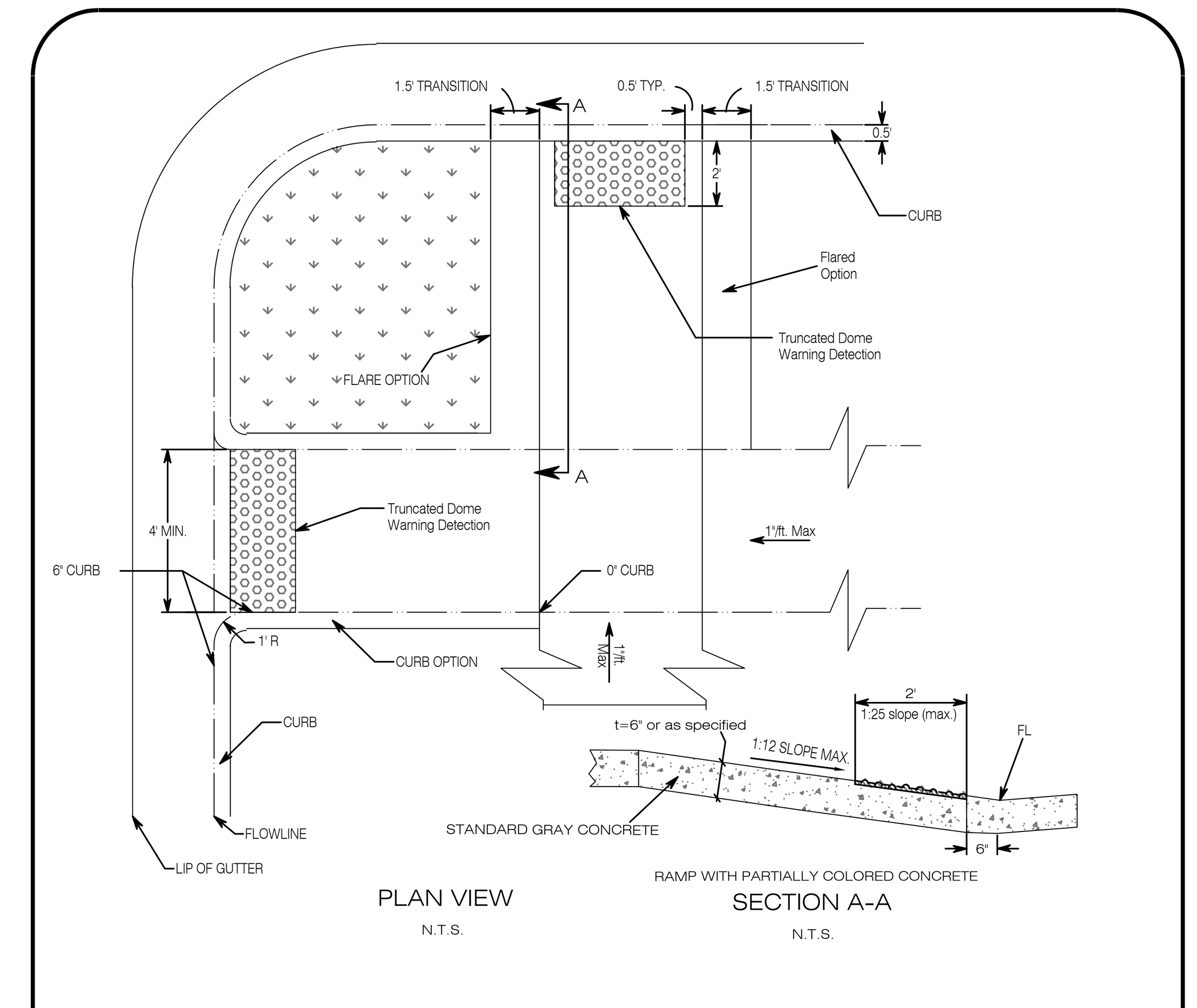
STANDARD SIDEWALK			
LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 1 / DATE: 04/01/07	DRAWING 1601

401 D4 STANDARD SIDEWALK
NOT TO SCALE



SIDEWALK DETAIL			
LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 2 / DATE: 04/01/07	DRAWING 1602

402 D4 SIDEWALK DETAIL
NOT TO SCALE



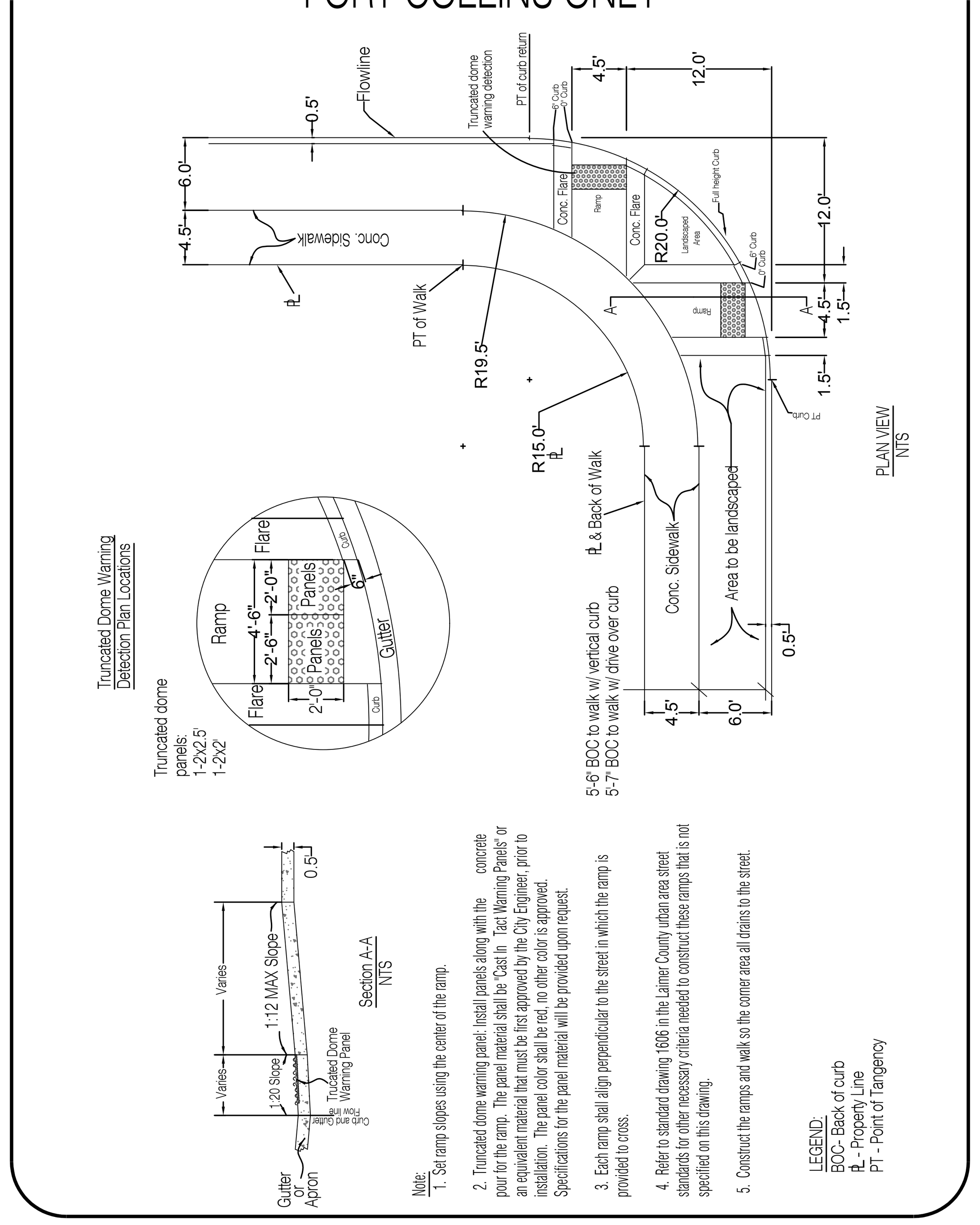
NOTES:

1. NO JOINTS ARE ALLOWED IN THE FLOWLINE. SIX INCH WIDE CURB OR "DUMMY JOINT" MAY BE TOOLED NO CLOSER THAN 6 INCHES FROM FLOW LINE AS SHOWN.
2. MINIMUM CONCRETE THICKNESS IS 6 INCHES.
3. JOINT PATTERN TO BE ACCORDING TO 'INTERSECTION GUTTER DETAIL' OR AS DETERMINED BY THE LOCAL ENTITY.
4. WOOD FLOAT FINISH IS REQUIRED OVER THE SLOPED SURFACE OF RAMP AND FLARES.
5. A 6 INCH WIDE CURB MAY BE POURED AT THE BACK OF THE RAMP AS SHOWN IF REQUIRED. IF CURB IS USED IT SHALL MATCH THE CURB AND GUTTER STYLE OF ADJACENT CURB AND GUTTER.
6. MINIMUM RAMP WIDTH SHALL BE FOUR FEET, OR THE SAME AS THE WIDEST ADJACENT SIDEWALK, WHICHEVER IS GREATER, UP TO A MAXIMUM WIDTH OF 8 FEET.
7. THE RAMP LANDING MAY BE POURED MONOLITHIC WITH THE ADJACENT TRANSITIONS PROVIDED THAT AN APPROVED 'SHAKE-ON' PIGMENT BE USED TO COLOR THE LANDING AREA.
8. T= THICKNESS (AS SPECIFIED ON PLANS OR LOCAL ENTITY ENGINEER).

PEDESTRIAN RAMP DETAIL (For New Const. & Alterations)			
LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 1 / DATE: 04/01/07	DRAWING 1606

403 D4 PEDESTRIAN RAMP DETAIL
NOT TO SCALE

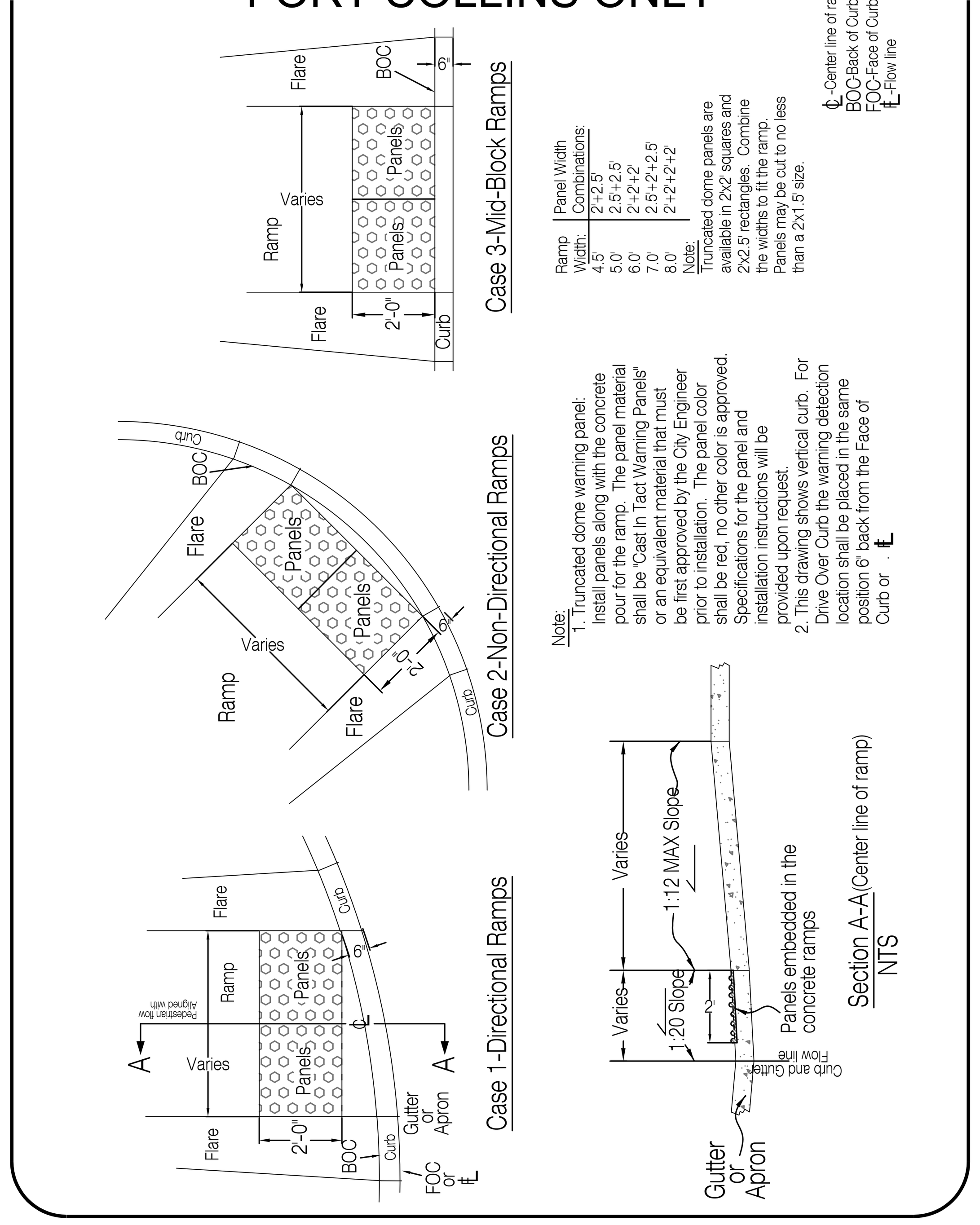
FORT COLLINS ONLY



RESIDENTIAL LOCAL STREET ACCESS RAMPS			
LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: / DATE: 04/01/07	DRAWING 1606(a)

404 D4 RESIDENTIAL LOCAL STREET ACCESS RAMPS
NOT TO SCALE

FORT COLLINS ONLY



TRUNCATED DOME WARNING FOR ACCESS RAMPS			
LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: / DATE: 04/01/07	DRAWING 1607

405 D4 TRUNCATED DOME WARNING FOR ACCESS RAMPS
NOT TO SCALE

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City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED:	City Engineer	Date
CHECKED BY:	Water & Wastewater Utility	Date
CHECKED BY:	Stormwater Utility	Date
CHECKED BY:	Parks & Recreation	Date
CHECKED BY:	Traffic Engineer	Date
CHECKED BY:	Environmental Planner	Date

Revisions: No. | By: | Date:

REVIEW SET
NOT FOR CONSTRUCTION
02/11/15

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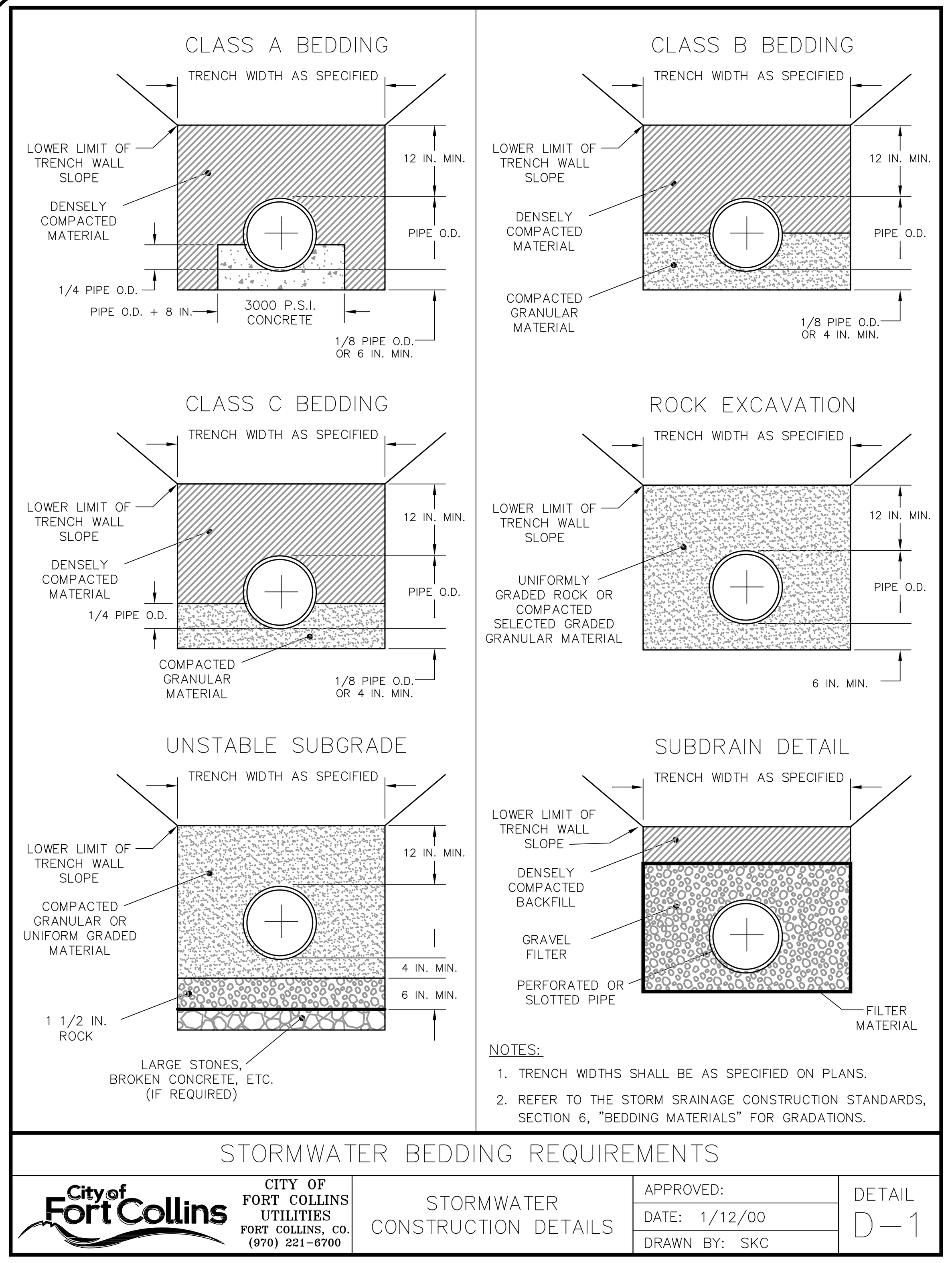
NORTHERN ENGINEERING
301 North Howes Street, Suite 100 Fort Collins, Colorado 80521
PHONE: 970.221.4158 www.northernengineering.com

PROJECT: 620-004 | DATE: February 11, 2015
DESIGNED BY: A. Reese | SCALE: N/A
DRAWN BY: B. Ruch | REVIEWED BY: N. Haws

HILL POND RESIDENCES
SITE DETAILS

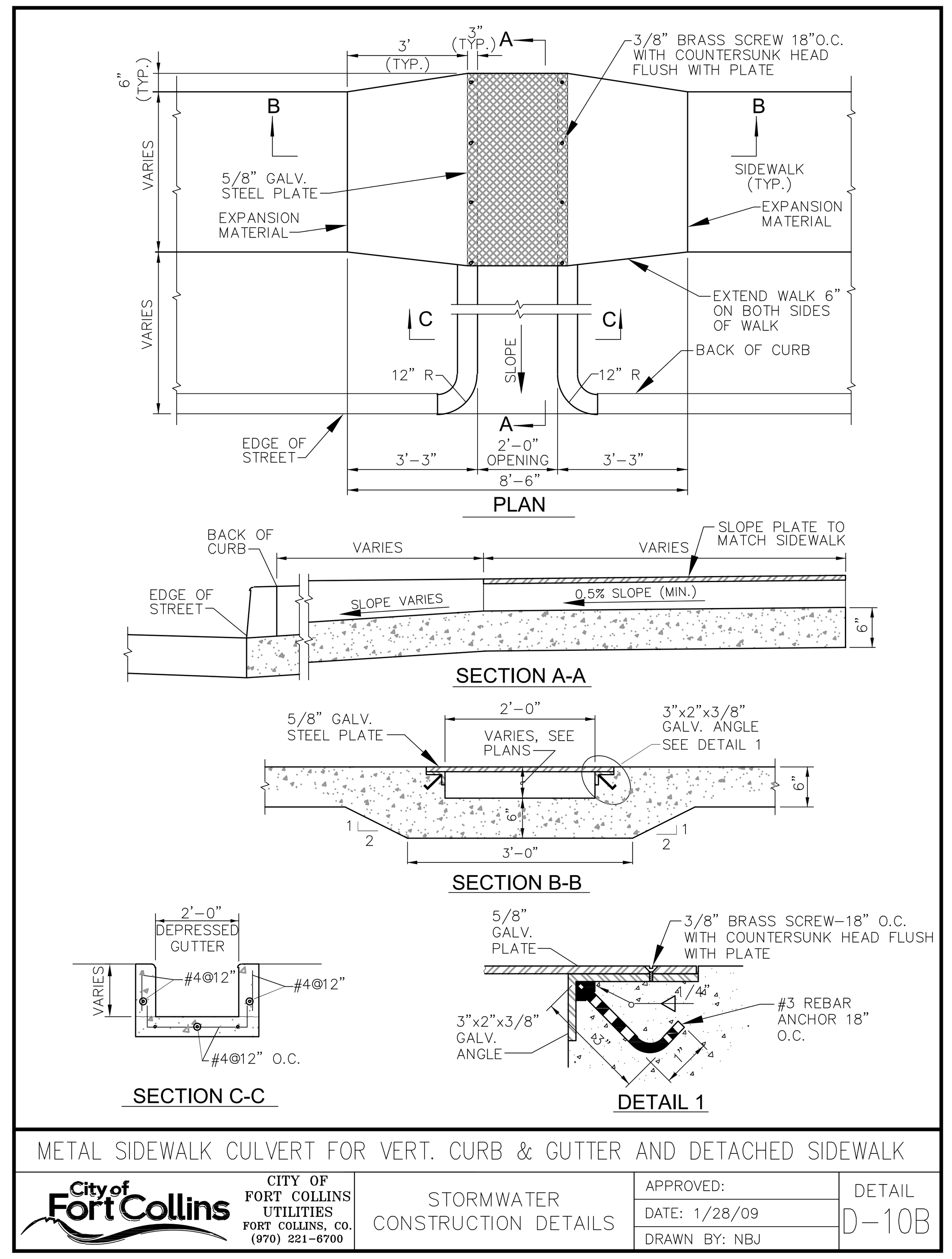
Sheet D4
Of 15 Sheets



STORMWATER BEDDING REQUIREMENTS

City of Fort Collins Utilities, Fort Collins, Co. (970) 221-6700 — STORMWATER CONSTRUCTION DETAILS — DATE: 1/12/00 — DRAWN BY: SKC — DETAIL D-1

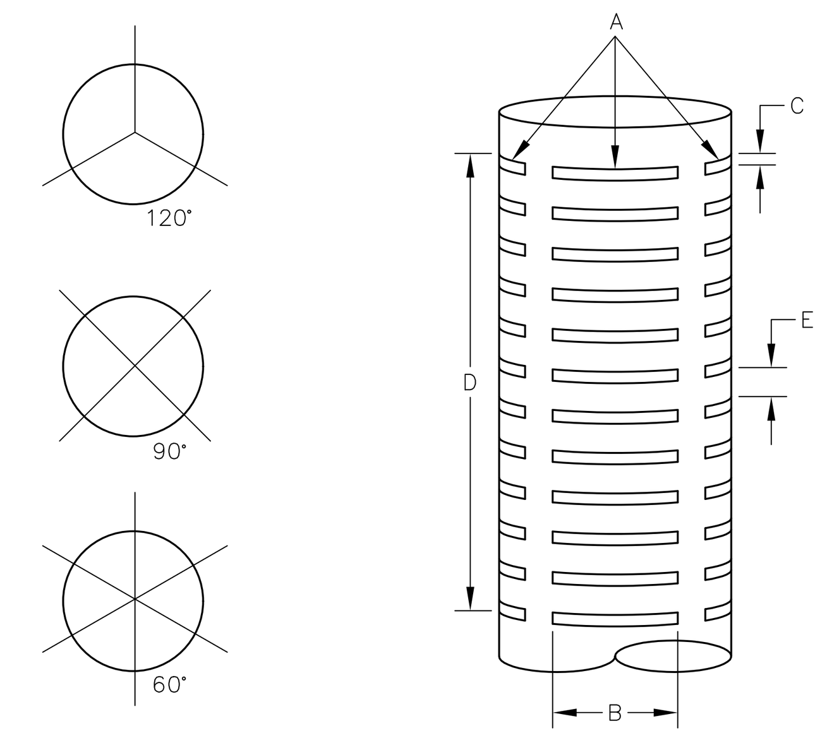
500 / D5 — STORM BEDDING REQUIREMENTS — NOT TO SCALE



METAL SIDEWALK CULVERT FOR VERT. CURB & GUTTER AND DETACHED SIDEWALK

City of Fort Collins Utilities, Fort Collins, Co. (970) 221-6700 — STORMWATER CONSTRUCTION DETAILS — DATE: 1/28/09 — DRAWN BY: NBJ — DETAIL D-10B

501 / D5 — SIDEWALK CHASE — NOT TO SCALE

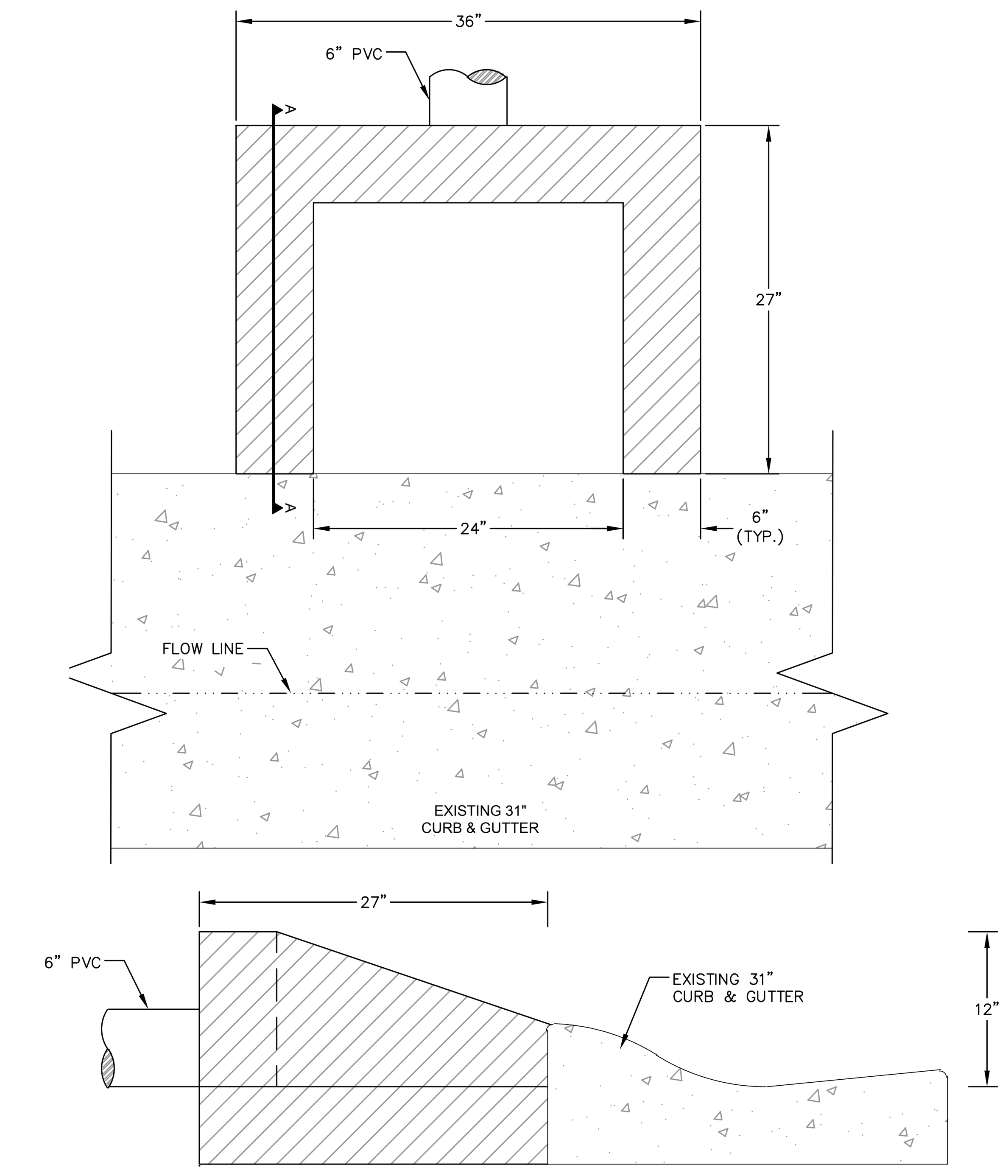


SCREEN SLOT TABLE

	A	B	C	D	E	F
PIPE SIZE	ROWS OF SLOTS	SLOT LENGTH	MAXIMUM SLOT WIDTH	APPROX. SLOT/ROW PER FOOT	APPROX. SLOT SPACING	OPEN AREA PER FOOT
6"	3 (MIN.) - 6 (MAX.)	1.38"-2.35"	0.032"	14	1/2"-3/4"	1.98-3.15 SQ. IN.

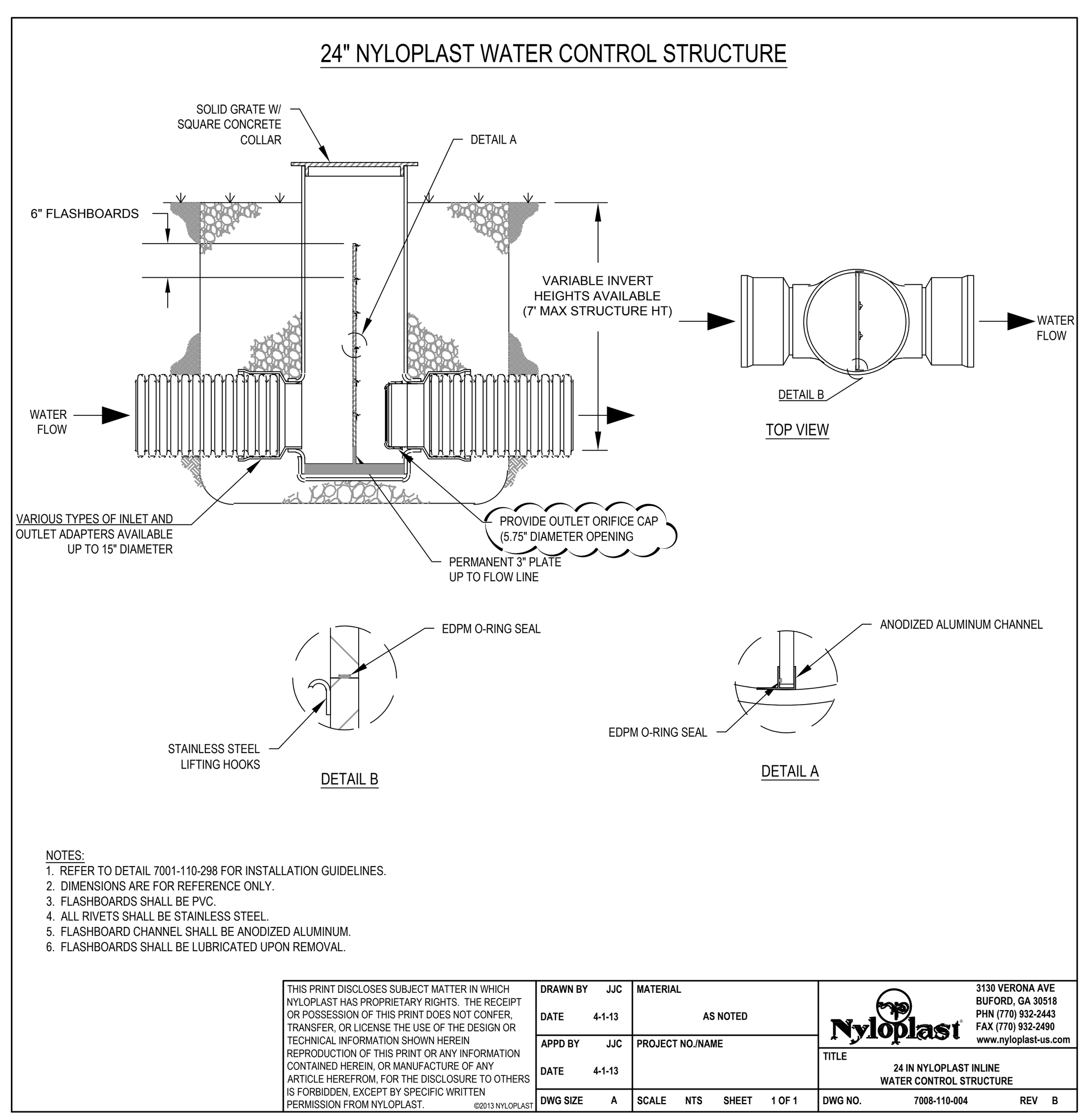
NOTE:
"SLOTTED PVC" AND "PERFORATED PVC" SHALL MEAN THE SAME THING WHEN REFERRING TO UNDERDRAINS IN THIS PLAN SET.

502 / D5 — DIMENSIONS FOR SLOTTED PVC PIPE — NOT TO SCALE

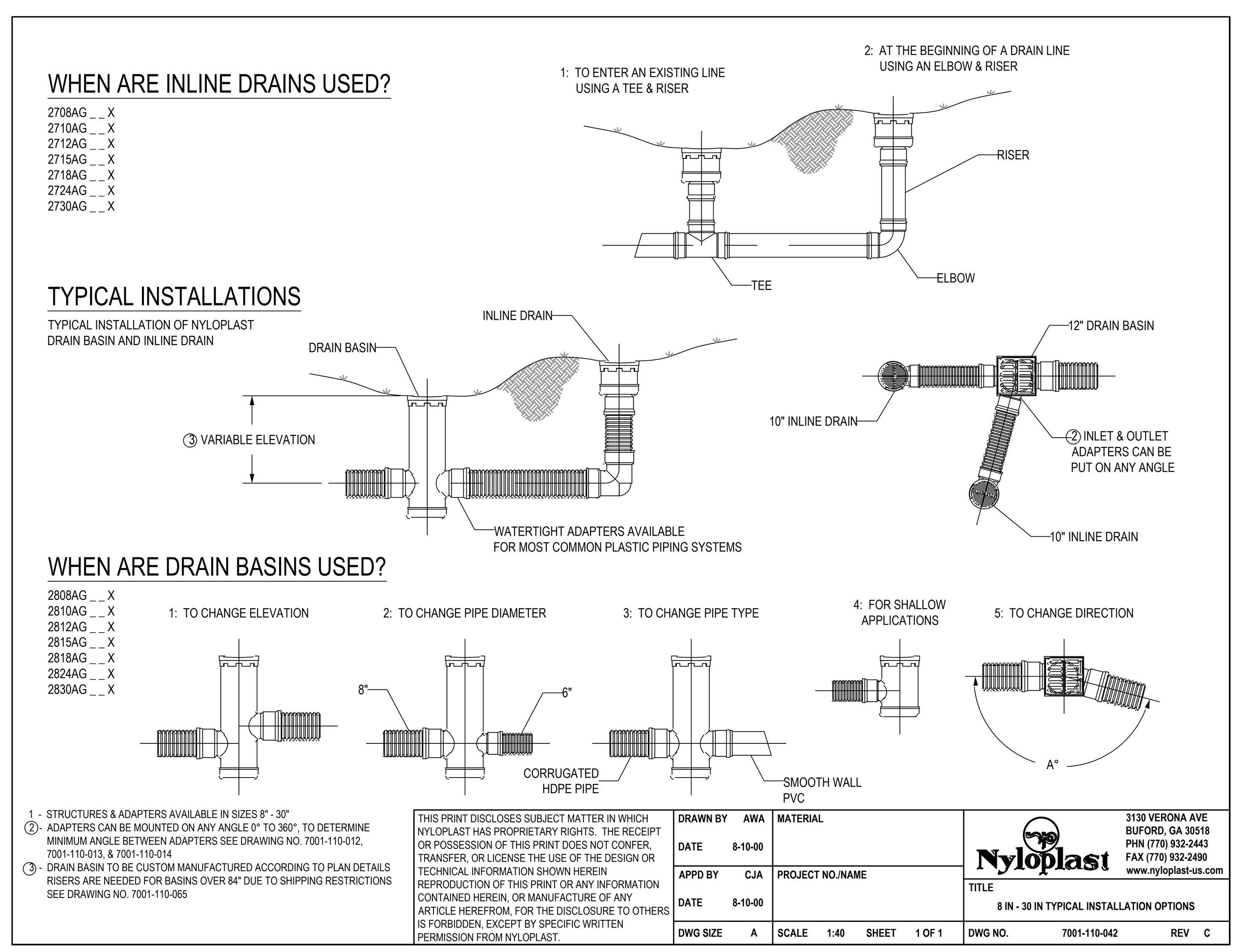


PAVER OUTFALL SECTION A-A

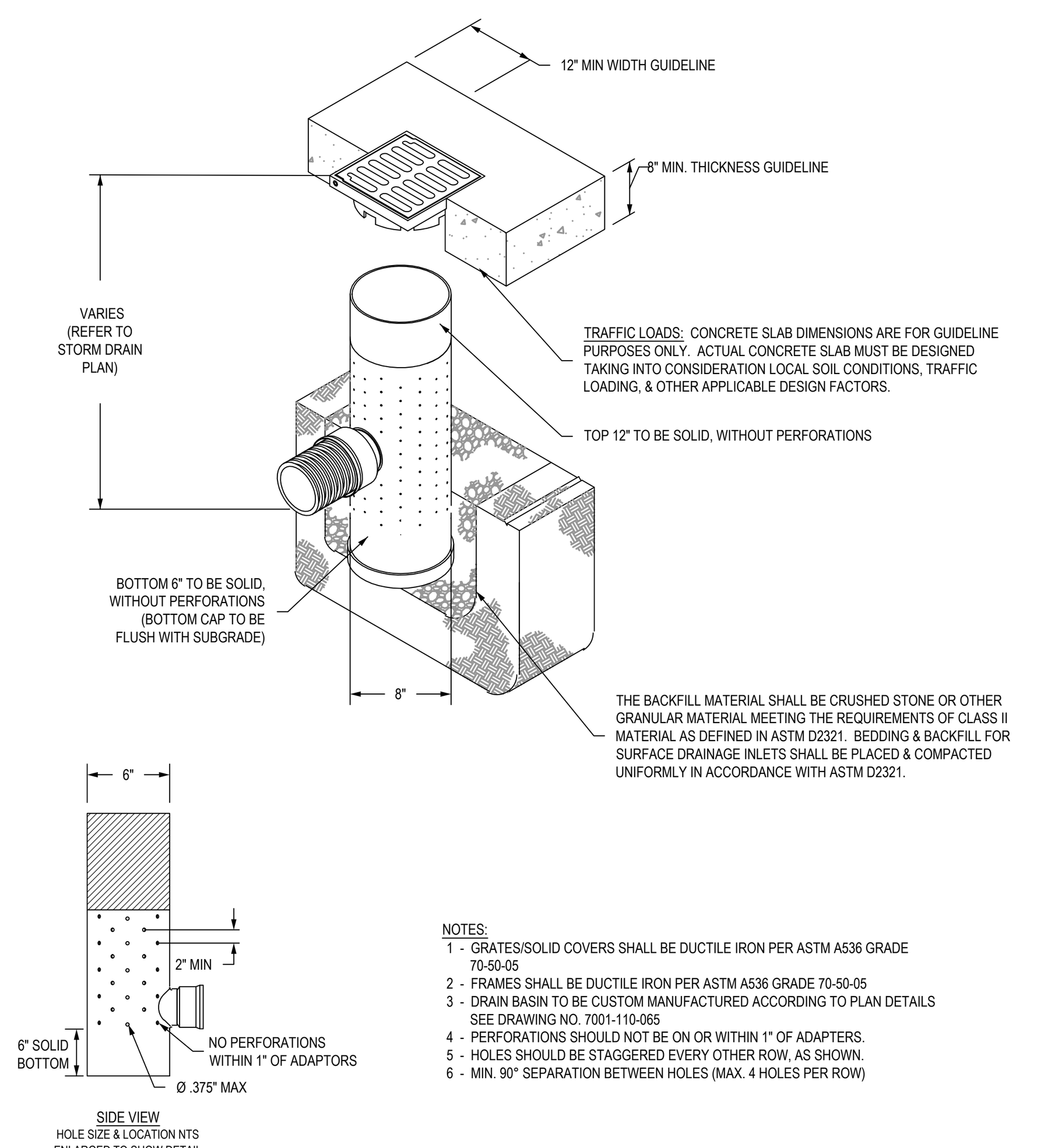
503 / D5 — CONCRETE COLLAR — NOT TO SCALE



505 / D5 — WQ CONTROL BASIN — NOT TO SCALE

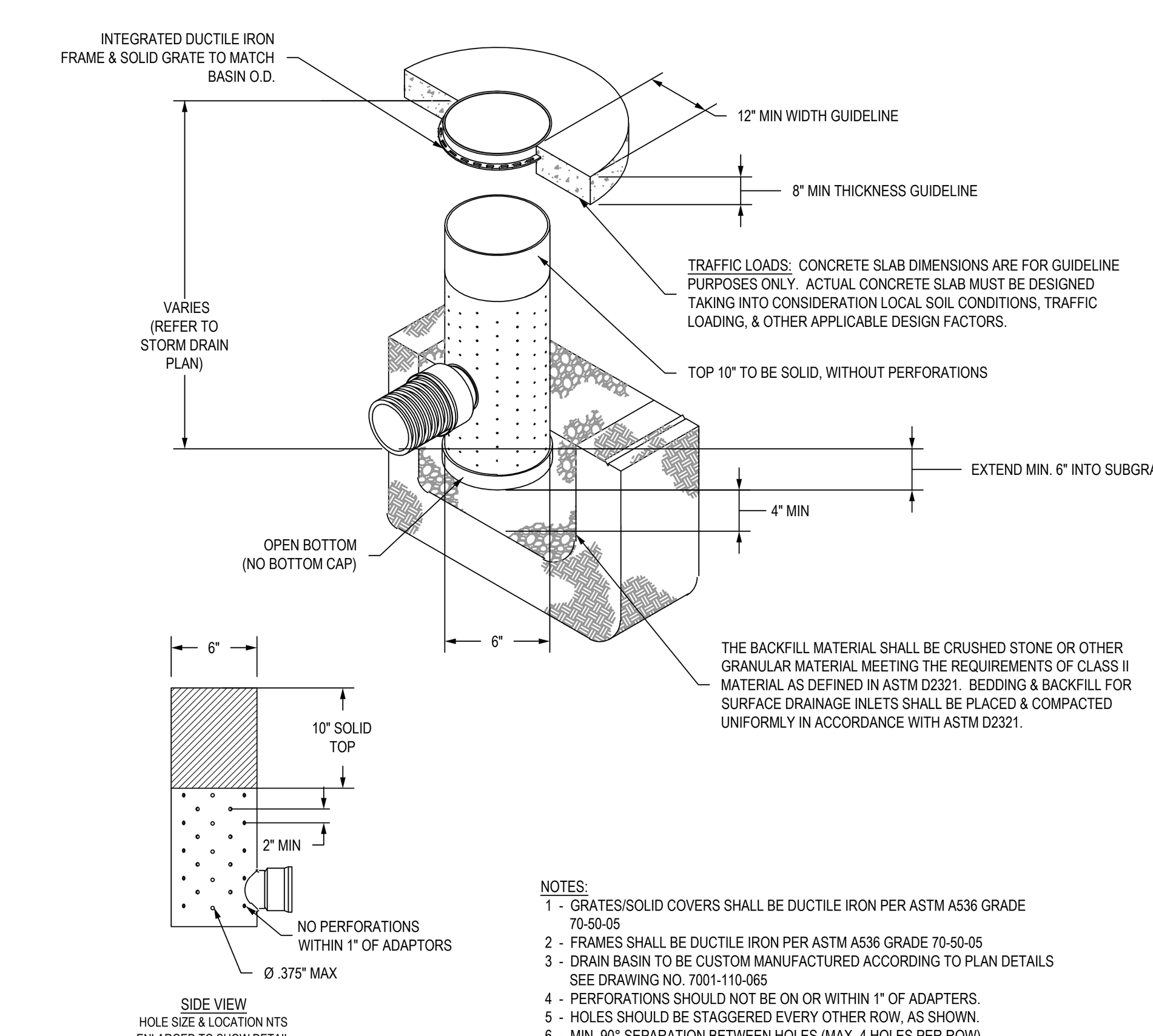


506 / D5 — TYPICAL INSTALLATION OPTIONS — NOT TO SCALE



NOTE:
CONTRACTOR SHALL USE SQUARE COLLAR IN PERMEABLE PAVER AREAS. COLLAR SHALL BE ORIENTED WITH PAVERS SO AS TO REDUCE IRREGULAR CUTS OR PAVER SHAPES.

507 / D5 — ROOFDRAIN DOWNSPOUT DISCHARGE BASIN — NOT TO SCALE



508 / D5 — PRIVATE UNDERDRAIN CLEANOUT — NOT TO SCALE

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CHECKED BY: Traffic Engineer — Date
CHECKED BY: Environmental Planner — Date

REVIEW SET
NOT FOR CONSTRUCTION 02/11/15

Revisions: No. / By / Date

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NORTHERN ENGINEERING
301 North Howes Street, Suite 100, Fort Collins, Colorado 80521
PHONE: 970.221.4158 www.northernengineering.com

PROJECT: 820-004 — DATE: February 11, 2015 — DESIGNED BY: A. Reese — SCALE: N/A — DRAWN BY: B. Ruch — REVIEWED BY: N. Haws

HILL POND RESIDENCES

DRAINAGE DETAILS

Sheet D5 Of 15 Sheets

NORTHE

20 0 20 40 60 Feet

(IN FEET)
1 inch = 20 ft.

LEGEND:

PROPOSED STORM SEWER	
PROPOSED SUBDRAIN	SD
PROPOSED INLET	
PROPOSED CONTOUR	93
EXISTING CONTOUR	4953
PROPOSED SWALE	
PROPOSED CURB & GUTTER	
PROPERTY BOUNDARY	
DESIGN POINT	A
FLOW ARROW	
DRAINAGE BASIN LABEL	BASIN DESIGNATION C 0.60 ac BASIN AREA (AC)
DRAINAGE BASIN BOUNDARY	
PROPOSED SWALE SECTION	1 1
PROPOSED PERMEABLE PAVERS	

NOTES:

1. REFER TO THE "PRELIMINARY DRAINAGE REPORT FOR HILL POND RESIDENCES" DATED JANUARY 21, 2015 BY NORTHERN ENGINEERING, DATED FEBRUARY 11, 2015 FOR ADDITIONAL INFORMATION.

BENCHMARK

PROJECT DATUM: NGVD 29 (OLD CITY OF FORT COLLINS DATUM)

BENCHMARK #1:
City of Fort Collins Benchmark 01-93
Elevation = 5023.27

BENCHMARK #2:
City of Fort Collins Benchmark 29-92
Elevation = 5022.50

NOTE: IF NAVD 88 DATUM IS REQUIRED FOR ANY PURPOSE, THE FOLLOWING EQUATION SHOULD BE USED:
NAVD88 = NGVD29 UNADJUSTED + 3.17'

**FOR DRAINAGE REVIEW ONLY
NOT FOR CONSTRUCTION**

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CHECKED BY:	Parks & Recreation	Date
CHECKED BY:	Traffic Engineer	Date
CHECKED BY:	Environmental Planner	Date

No. | Revisions: | By: | Date:

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PHONE: 970.221.4158
www.northernengineering.com

PROJECT: 620-004
DATE: February 11, 2015
DESIGNED BY: A. Reese
SCALE: 1"=20'
DRAWN BY: B. Ruch
REVIEWED BY: N. Haws

HILL POND RESIDENCES
DRAINAGE EXHIBIT

Sheet
DR1
Of 15 Sheets

TABLE OF CONSTRUCTION SEQUENCE AND BMP APPLICATION

Project: Hill Pond Residences

CONSTRUCTION PHASE	PHASE I	PHASE II	PHASE III	PHASE IV
Grading (Include Offsite)				
Overlot	■			
Pipeline Installation				
Stormwater		■		
Sewer Service		■		
Water Service		■		
Concrete Installation				
Site Walls		■	■	
Building Structure		■	■	
Curb and Gutter		■	■	
Miscellaneous				
Hardscape Amenities			■	■
BEST MANAGEMENT PRACTICES				
Temporary				
Inlet Protection (IP)	■	■	■	■
Vehicle Tracking Control (VTC)	■	■		
Flow Barriers (Bales, Wattles, etc.) (WD)	■	■	■	■
Concrete Washout Area (CWA)		■	■	
Preventative Maintenance Activities/Meetings/etc.	■	■	■	■
Silt Fence (SF)	■	■	■	■
Permanent				
Mulching/Sealant				■

NORTH

20 0 20 40 60 Feet

(IN FEET)
1 inch = 20 ft.

LEGEND:

PROPOSED STORM SEWER
PROPOSED SUBDRAIN
PROPOSED INLET
PROPOSED CONTOUR
EXISTING CONTOUR
PROPOSED SWALE
PROPOSED CURB & GUTTER
PROPERTY BOUNDARY

SILT FENCE — SF
INLET PROTECTION — IP
WATTLE PROTECTION — W
ROCK SOCK — RS
VEHICLE TRACKING PAD — VTC
CONCRETE WASHOUT AREA — CWA

NOTE:
ALL BMP'S SHOWN ON THIS PLAN ARE GRAPHIC REPRESENTATIONS ONLY. FINAL DETERMINATION OF SIZE AND LOCATION SHALL BE DETERMINED BY THE CONTRACTOR AND DOCUMENTED ON THE DYNAMIC SITE PLAN.

FIELD SURVEY BY:

ORIGINAL FIELD SURVEY: INTERMILL LAND SURVEYING, INC.
PROJECT NO. P-13-7461
DATE: OCTOBER 28, 2013

BENCHMARKS:

BENCHMARK #1:
City of Fort Collins Benchmark 01-93
NGVD29 Elevation= 5023.27

BENCHMARK #2:
City of Fort Collins Benchmark 29-92
NGVD29 Elevation= 5022.50

GENERAL NOTES:

1. CONTRACTOR SHALL IMMEDIATELY STABILIZE ALL DISTURBED SLOPES BY CRIMP MULCHING OR SIMILAR METHODS (AS APPLICABLE).
2. TOTAL DISTURBED AREA = 2.18 ACRES
3. SWMP ADMINISTRATOR:
   Contact ____________________
   Company ____________________
   Address ____________________
   Phone ____________________
4. CONTRACTOR TO PROVIDE VEHICLE TRACKING CONTROL FOR CONCRETE WASHOUT AREA IF ACCESS IS OFF PAVEMENT.
5. SEE "GRADING & EROSION CONTROL NOTES" ON SHEET CS2 OF THE UTILITY PLAN SET FOR HILL POND RESIDENCES PREPARED BY NORTHERN ENGINEERING DATED FEBRUARY 11, 2015 FOR ADDITIONAL INFORMATION.
6. REFER TO THE "STORM WATER MANAGEMENT PLAN & EROSION CONTROL REPORT FOR HILL POND RESIDENCES" BY NORTHERN ENGINEERING, DATED FEBRUARY 11, 2015 FOR ADDITIONAL INFORMATION.

EROSION CONTROL NOTES:

1. IT SHOULD BE NOTED THAT ANY EROSION CONTROL PLAN SERVES ONLY AS A GUIDELINE TO THE CONTRACTOR. STAGING AND/OR PHASING OF BEST MANAGEMENT PRACTICES (BMPs) IS EXPECTED. ADDITIONAL AND/OR DIFFERENT BMPs FROM THOSE ORIGINALLY DEPICTED MAY BE NECESSARY DURING CONSTRUCTION DUE TO CHANGING SITE CONDITIONS OR AS REQUIRED BY LOCAL AUTHORITIES.
2. THIS EROSION CONTROL PLAN IS SCHEMATIC IN NATURE. AS SUCH, GRAPHICAL SYMBOLS MAY NOT BE TO SCALE, NOR ARE THEY NECESSARILY SHOWN IN THEIR EXACT LOCATION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITTING (CITY, STATE DISCHARGE PERMIT, ETC.) AND COMPLIANCE WITH GOVERNING AUTHORITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR (OR PERMIT HOLDER) TO ENSURE EROSION CONTROL MEASURES ARE PROPERLY MAINTAINED AND FOLLOWED.
4. CONTRACTOR SHALL IMPLEMENT THE APPROPRIATE EROSION CONTROL MEASURES ACCORDING THE THE CONSTRUCTION SEQUENCING AND LEVEL OF SITE STABILIZATION.
5. CONTRACTOR SHALL IMPLEMENT APPROPRIATE INLET PROTECTION FOR ALL STORM DRAINS, SWALES, PONDS AND RAIN GARDENS UNTIL SITE IS FULLY STABILIZED.
6. CONTRACTOR SHALL IMPLEMENT APPROPRIATE INLET PROTECTION FOR DOWNSPOUT CONNECTIONS, TO THE STORM DRAIN SYSTEM, UNTIL CONNECTION IS ESTABLISHED WITH DOWNSPOUT.
7. INLET PROTECTION SHALL BE ADAPTED, AS NECESSARY, TO THE SURROUNDING SURFACE TYPE AND CONDITION (i.e., STAKE-DRIVEN WATTLES FOR BARE SOIL, SAND BAGS OR GRAVEL SOCKS FOR PAVEMENT, ETC.)
8. CONTRACTOR IS RESPONSIBLE FOR STABILIZING ALL SLOPES, PARTICULARLY THOSE STEEPER THAN 6:1. CRIMP MULCHING, HYDRO MULCHING, EROSION MATS, TEMPORARY IRRIGATION, AND ADDITIONAL WATTLES OR SILT FENCING MAY BE NECESSARY TO ESTABLISH VEGETATIVE COVER AND STABILIZE THE SLOPE.
9. ADDITIONAL WATTLES, SILT FENCE, OR OTHER MEASURES, MAY BE NECESSARY TO INSURE THAT EACH BUILDING PAD IS STABILIZED THROUGHOUT CONSTRUCTION. AT NO TIME SHALL SEDIMENT BE ALLOWED TO CROSS THE PUBLIC SIDEWALKS.
10. CONTRACTOR SHALL IMPLEMENT APPROPRIATE PERIMETER PROTECTION FOR AREAS DIRECTING DRAINAGE OFFSITE. PERIMETER PROTECTION SHALL BE ADAPTED, AS NECESSARY, TO THE SURROUNDING SURFACE TYPE AND CONDITION (i.e., STAKE-DRIVEN SEDIMENT CONTROL LOGS OR SILT FENCE FOR BARE SOIL, SAND BAGS OR GRAVEL SOCKS FOR PAVEMENT, ETC.)
11. FUELING FACILITIES SHALL BE LOCATED AT LEAST ONE HUNDRED (100) FEET FROM NATURAL BODY OF WATER, WETLAND, NATURAL DRAINAGE WAY OR MANMADE DRAINAGE WAY. THE FUEL TANKS AND FUELING AREA MUST BE SET IN A CONTAINMENT AREA THAT WILL NOT ALLOW A FUEL SPILL TO DIRECTLY FLOW, SEEP, RUN OFF, OR BE WASHED INTO A BODY OF WATER, WETLAND OR DRAINAGE WAY.
12. CONSTRUCTION WASTE STORAGE (DUMPSTERS) AND PORTABLE SANITATION UNITS (CONSTRUCTION TOILETS) SHALL BE LOCATED AT LEAST FIFTY (50) FEET FROM ANY STORMWATER INLET, WETLAND, OR DRAINAGE WAY. SAID FACILITIES MUST BE SET IN A CONTAINMENT AREA THAT WILL NOT ALLOW POLLUTANTS TO DIRECTLY FLOW, SEEP, RUN OFF, OR BE WASHED INTO A BODY OF WATER, WETLAND OR DRAINAGE WAY. DUMPSTERS SHALL BE LOCATED ON FLAT, STABLE GROUND, AND CONSTRUCTION TOILETS SHALL BE STAKED DOWN.
13. THE CONTRACTOR AND ALL SUBCONTRACTORS WILL COOPERATE WITH THE CITY'S CONSTRUCTION INSPECTORS BY CEASING OPERATIONS WHEN WINDS ARE OF SUFFICIENT VELOCITY TO CREATE BLOWING DUST WHICH, IN THE INSPECTOR'S OPINION, IS HAZARDOUS TO THE PUBLIC HEALTH AND WELFARE.
14. WHERE SEASONAL CONSTRAINTS (E.G., DURING SUMMER AND WINTER MONTHS) INHIBIT PERMANENT SEEDING OPERATIONS, DISTURBED AREAS WILL BE TREATED WITH MULCH AND MULCH TACKIFIER OR OTHER MATERIALS APPROVED BY EROSION CONTROL STAFF TO PREVENT EROSION.
15. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION ON PLANTING, REVEGETATION, HARDSCAPE AND OTHER PERMANENT SITE STABILIZATION METHODS.

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Revisions:
No.

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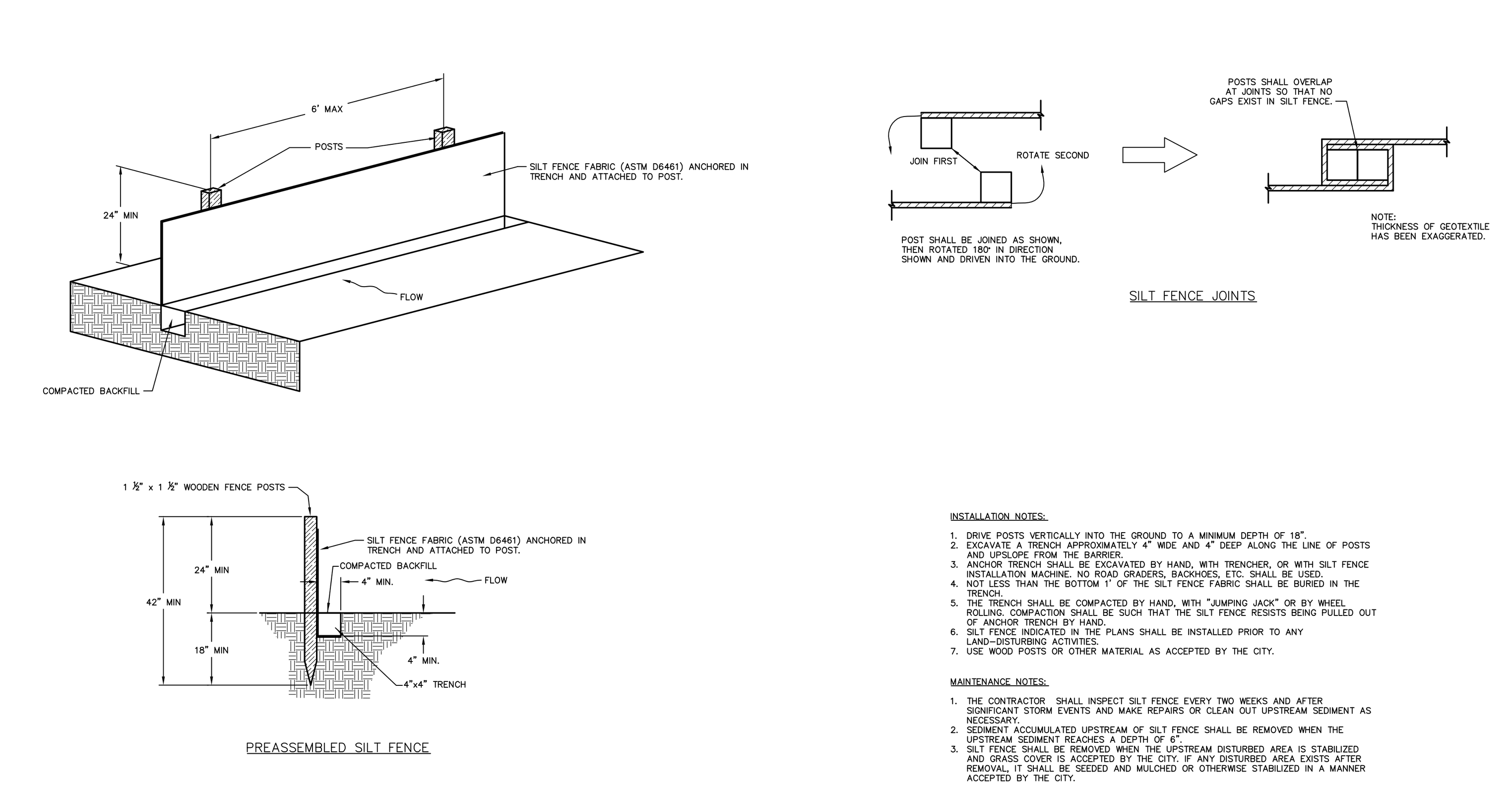
PROJECT: 620-004
DATE: February 11, 2015
DESIGNED BY: A. Reese
SCALE: 1"=20'
DRAWN BY: B. Ruch
REVIEWED BY: N. Haws

HILL POND RESIDENCES
EROSION CONTROL PLAN

Sheet
EC1
Of 15 Sheets



INSTALLATION NOTES:

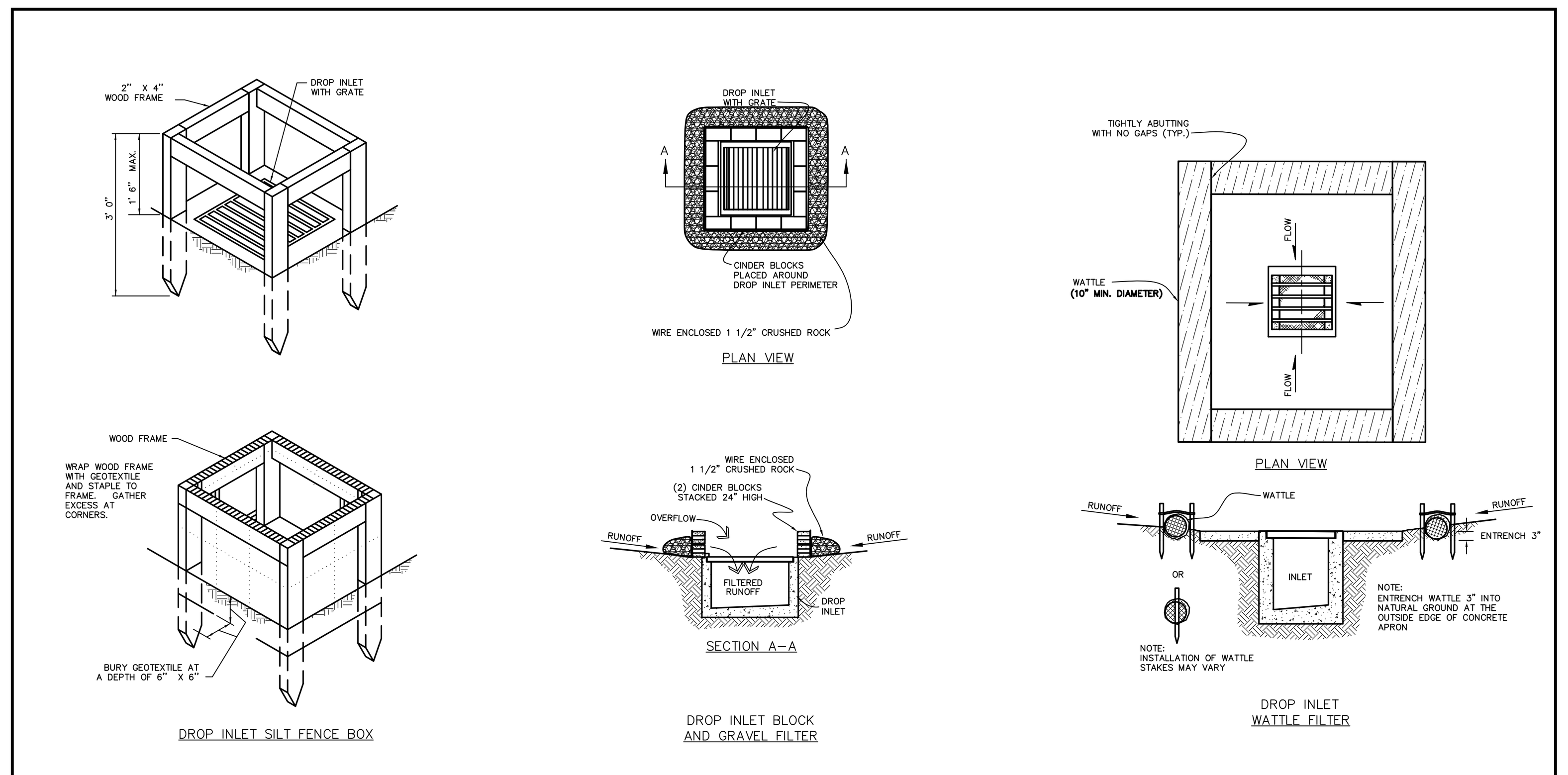
1. DRIVE POSTS VERTICALLY INTO THE GROUND TO A MINIMUM DEPTH OF 18".
2. EXCAVATE A TRENCH APPROXIMATELY 4" WIDE AND 4" DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
3. ANCHOR TRENCH SHALL BE EXCAVATED BY HAND, WITH TRENCHER, OR WITH SILT FENCE INSTALLATION MACHINE. NO ROAD GRADERS, BACKHOES, ETC. SHALL BE USED.
4. NOT LESS THAN THE BOTTOM 1' OF THE SILT FENCE FABRIC SHALL BE BURIED IN THE TRENCH.
5. THE TRENCH SHALL BE COMPACTED BY HAND, WITH "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT THE SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
6. SILT FENCE INDICATED IN THE PLANS SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
7. USE WOOD POSTS OR OTHER MATERIAL AS ACCEPTED BY THE CITY.

MAINTENANCE NOTES:

1. THE CONTRACTOR SHALL INSPECT SILT FENCE EVERY TWO WEEKS AND AFTER SIGNIFICANT STORM EVENTS AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
2. SEDIMENT ACCUMULATED UPSTREAM OF SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT REACHES A DEPTH OF 6".
3. SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE CITY. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER ACCEPTED BY THE CITY.

SF

01 / EC2 — SILT FENCE — NOT TO SCALE



GENERAL NOTES:

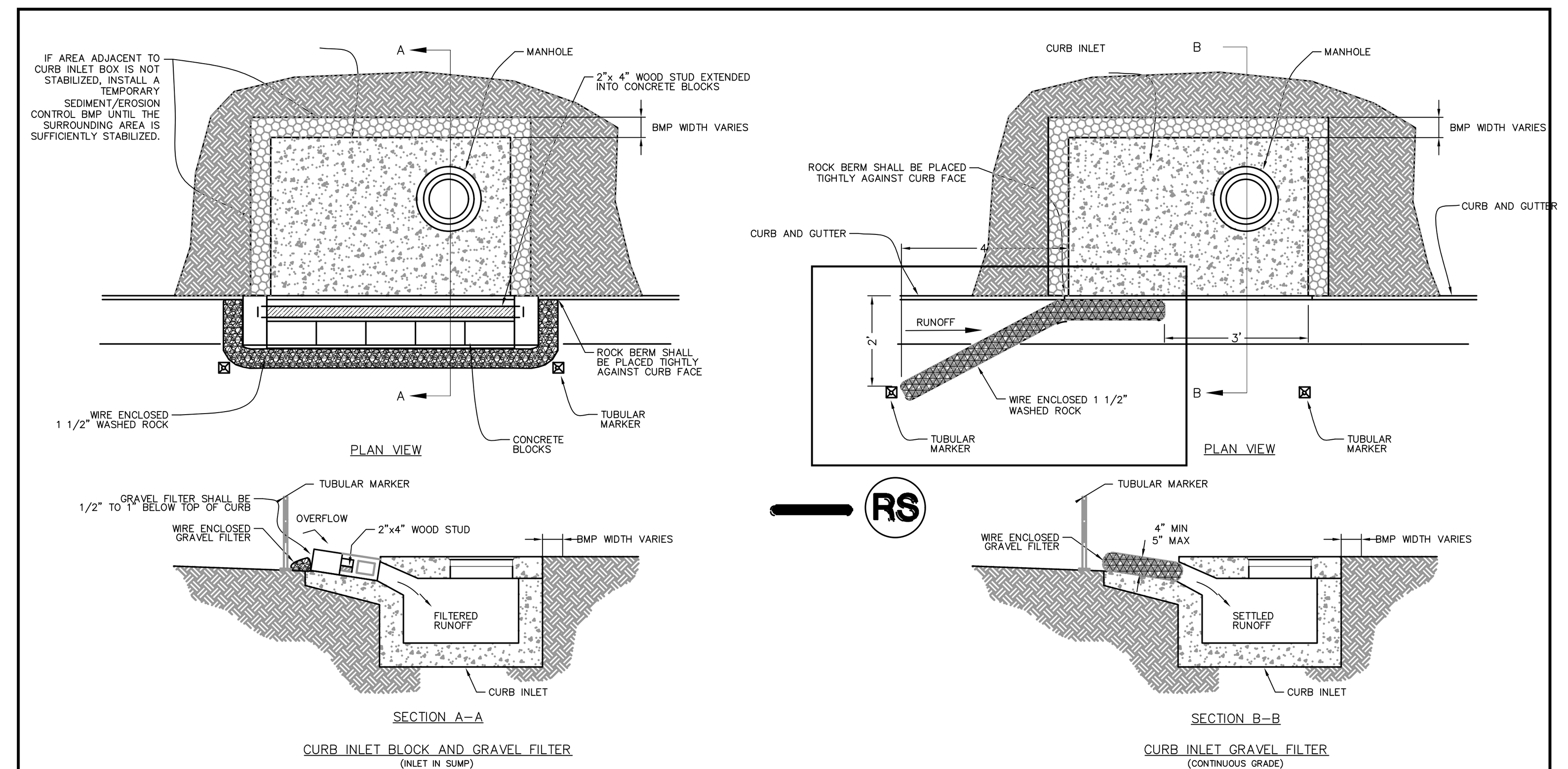
1. INLET PROTECTION AT AREA INLETS SHALL BE INSTALLED WITHIN 48 HOURS OF POURING INLET.
2. CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH A 1–1/2" MINUS GRADATION. RECYCLED CONCRETE MEETING THIS GRADATION MAY BE USED.
3. WIRE MESH SHALL BE FABRICATED OF 10 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1" (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48".
4. IT IS RECOMMENDED THAT FILTER FABRIC, SUCH AS GRATE MATES OR EQUIVALENT, OR OTHER TEMPORARY BMP BE PLACED BENEATH THE INLET GRATE AND MAINTAINED UNTIL THE SURROUNDING AREA DRAINING TO THE INLET IS SUFFICIENTLY STABILIZED.
5. OTHER AREA INLET PROTECTION METHODS WILL BE ALLOWED IF ACCEPTED BY THE CITY.

MAINTENANCE NOTES:

1. THE CONTRACTOR SHALL INSPECT INLET PROTECTION EVERY TWO WEEKS AND AFTER SIGNIFICANT STORM EVENTS AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
2. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED WHEN THE SEDIMENT DEPTH REACHES 1/2 OF THE DESIGN DEPTH.
3. TO PREVENT CLOGGING, INLET GRATE FILTER FABRIC SHOULD BE CLEANED OR REPLACED PERIODICALLY.
4. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED.
5. WHEN INLET PROTECTION AT AREA INLETS ARE REMOVED, THE DISTURBED AREA SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER ACCEPTED BY THE CITY.

IP

02 / EC2 — DROP INLET PROTECTION — NOT TO SCALE



GENERAL NOTES:

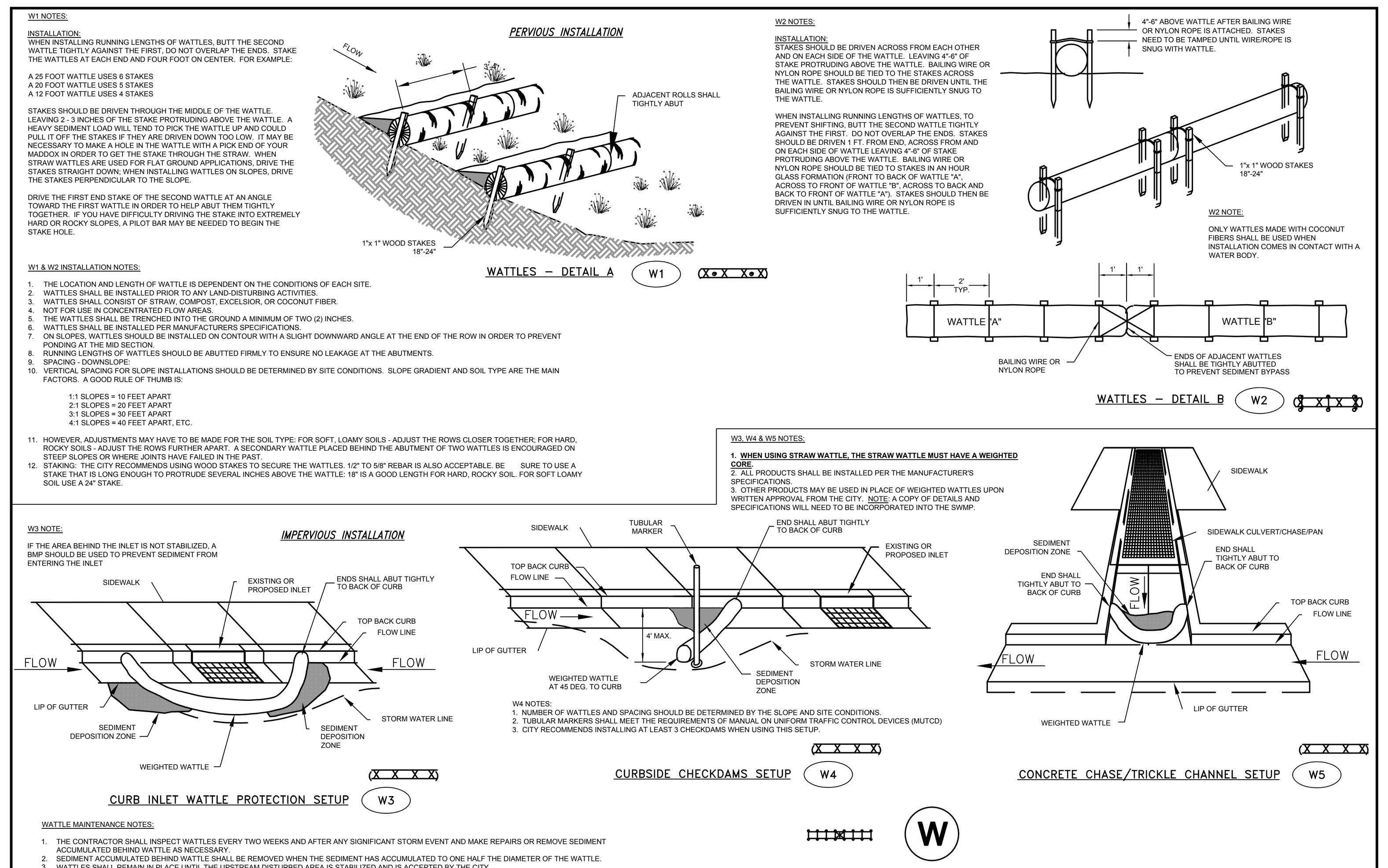
1. INTERIM CONFIGURATION INLET PROTECTION IN STREETS SHALL BE INSTALLED WITHIN 48 HOURS OF POURING INLET. INLET PROTECTION (AFTER PAVING) SHALL BE INSTALLED WITHIN 48 HOURS AFTER PAVING IS PLACED.
2. WASHED ROCK SHALL COMPLY WITH A 1–1/2" MINUS GRADATION.
3. WIRE MESH SHALL BE FABRICATED OF 10 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1" (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48".
4. TUBULAR MARKERS SHALL MEET REQUIREMENTS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
5. OTHER CURB INLET PROTECTION METHODS WILL BE ALLOWED IF ACCEPTED BY THE CITY.

MAINTENANCE NOTES:

1. THE CONTRACTOR SHALL INSPECT INLET PROTECTION EVERY TWO WEEKS AND AFTER SIGNIFICANT STORM EVENTS AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
2. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF ROCK BERM IS 2 1/2" OF THE CREST.
3. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED. UNLESS THE CITY ACCEPTS EARLIER REMOVAL OF INLET PROTECTION IN STREETS.

IP

03 / EC2 — CURB INLET PROTECTION — NOT TO SCALE



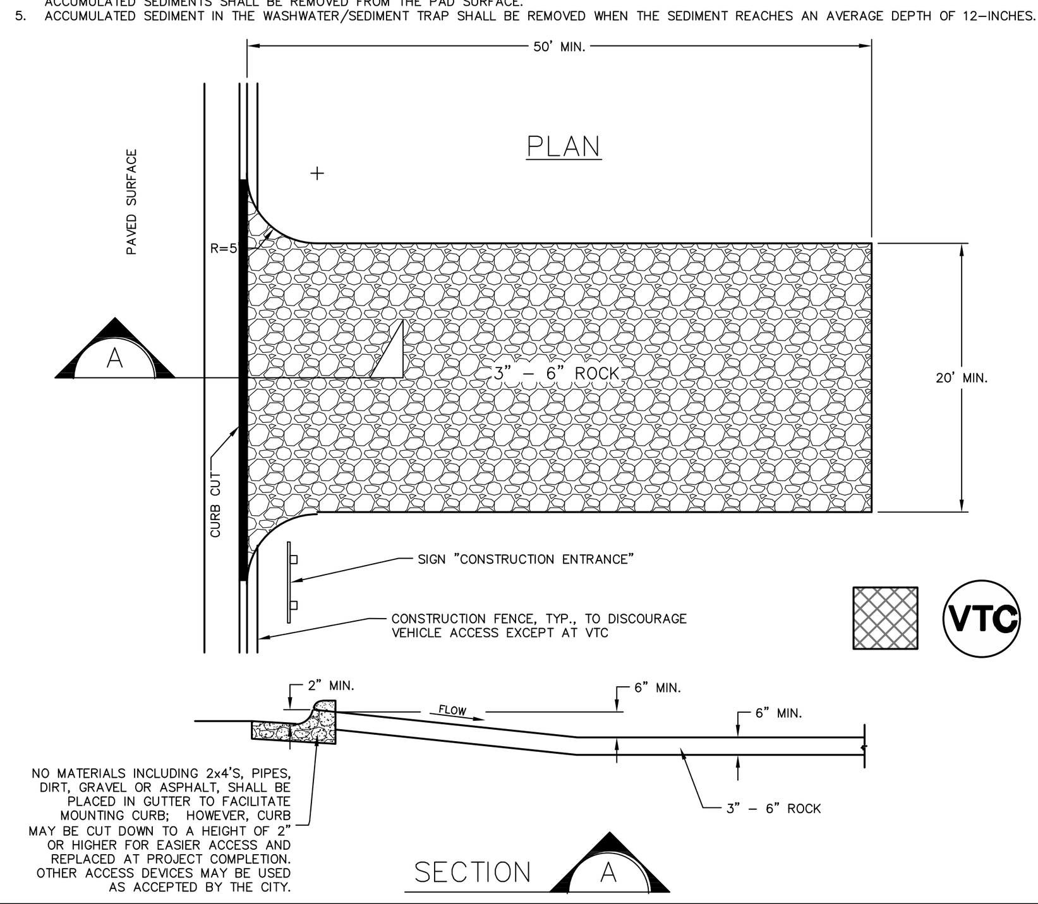
04 / EC2 — WATTLE INSTALLATION — NOT TO SCALE

INSTALLATION NOTES:

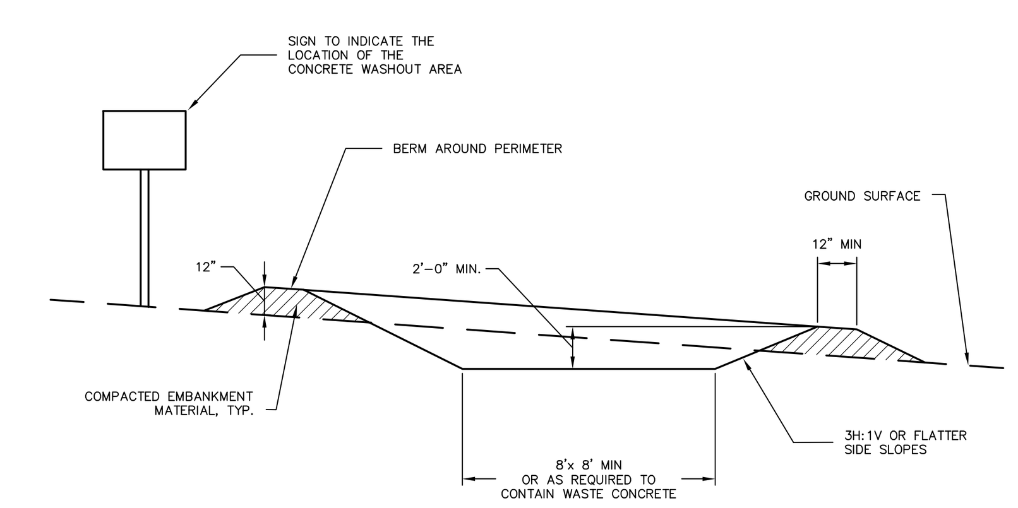
1. VEHICLE TRACKING CONTROL PAD SHALL BE LOCATED AT EVERY ACCESS POINT TO THE CONSTRUCTION SITE.
2. A SIGN SHALL BE PLACED NEXT TO THE VEHICLE TRACKING CONTROL PAD TO DESIGNATE THE LOCATION AS THE CONSTRUCTION ENTRANCE/EXIT.
3. VEHICLE TRACKING CONTROL PADS SHALL CONSIST OF HARD, DENSE, DURABLE STONE, ANGULAR IN SHAPE AND RESISTANT TO WEATHERING. ROUNDED STONE (i.e. RIVER ROCK AND COBBLES) SHALL NOT BE USED. THE STONES SHALL BE A MINIMUM OF 3" AND A MAXIMUM OF 6" DIAMETER. THE STONES SHALL HAVE A SPECIFIC GRAVITY OF AT LEAST 2.6. CONTROL OF GRADATION WILL BE BY VISUAL INSPECTION.
4. ANY CRACKED OR DAMAGED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED BY CONTRACTOR.
5. ALTHOUGH NOT NORMALLY USED, THE CITY RESERVES THE RIGHT TO REQUIRE VEHICLE TRACKING CONTROL WITH A TEMPORARY CATTLE GUARD AND/OR WHEEL WASH FACILITIES AT SITES WHERE TRACKING ONTO PAVED AREAS BECOMES A SIGNIFICANT PROBLEM AS DETERMINED BY THE CITY INSPECTOR.
6. IF VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES ARE REQUIRED, ALL WHEELS ON EVERY VEHICLE LEAVING THE SITE SHALL BE CLEANED OF MUD USING A PRESSURE-WASHER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A WATER SOURCE AND CONSTRUCTING A WASHWATER SEDIMENT TRAP.

MAINTENANCE NOTES:

1. CONTRACTOR SHALL INSPECT VEHICLE TRACKING CONTROL PAD DAILY. ROCK SURFACE SHALL BE CLEAN AND LOOSE ENOUGH TO RUT SLIGHTLY UNDER WHEEL LOADS AND CAUSE LOOSE ROCK TO DISLODGE MUD FROM TIRES. WHEN ROCK BECOMES COMPACTED OR FILLED WITH SEDIMENT SO THAT THE EFFECTIVENESS OF THE PAD IS DIMINISHED, CONTRACTOR SHALL RIP, TURN OVER, OR OTHERWISE LOOSEN ROCK, PLACE ADDITIONAL NEW ROCK, OR REPLACE WITH NEW ROCK AS NECESSARY TO RESTORE EFFECTIVENESS.
2. SEDIMENT AND OTHER MATERIAL SPILLED, DROPPED OR TRACKED ONTO PAVED SURFACES SHALL BE REMOVED IMMEDIATELY OR BY THE END OF EACH WORKING DAY.
3. VEHICLE TRACKING CONTROL PAD SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE AREA SHOULD BE TOPSOILED, SEEDED, CRIMPED, AND MULCHED OR OTHERWISE STABILIZED.
4. IF VEHICLE WHEEL WASH FACILITIES ARE REQUIRED, CONTRACTOR SHALL INSPECT VEHICLE TRACKING CONTROL AND WHEEL WASH FACILITIES DAILY. ACCUMULATED SEDIMENTS SHALL BE REMOVED FROM THE PAD SURFACE.
5. ACCUMULATED SEDIMENT IN THE WASHWATER/SEDIMENT TRAP SHALL BE REMOVED WHEN THE SEDIMENT REACHES AN AVERAGE DEPTH OF 12-INCHES.



05 / EC2 — VEHICLE CONTROL TRACKING PAD — NOT TO SCALE

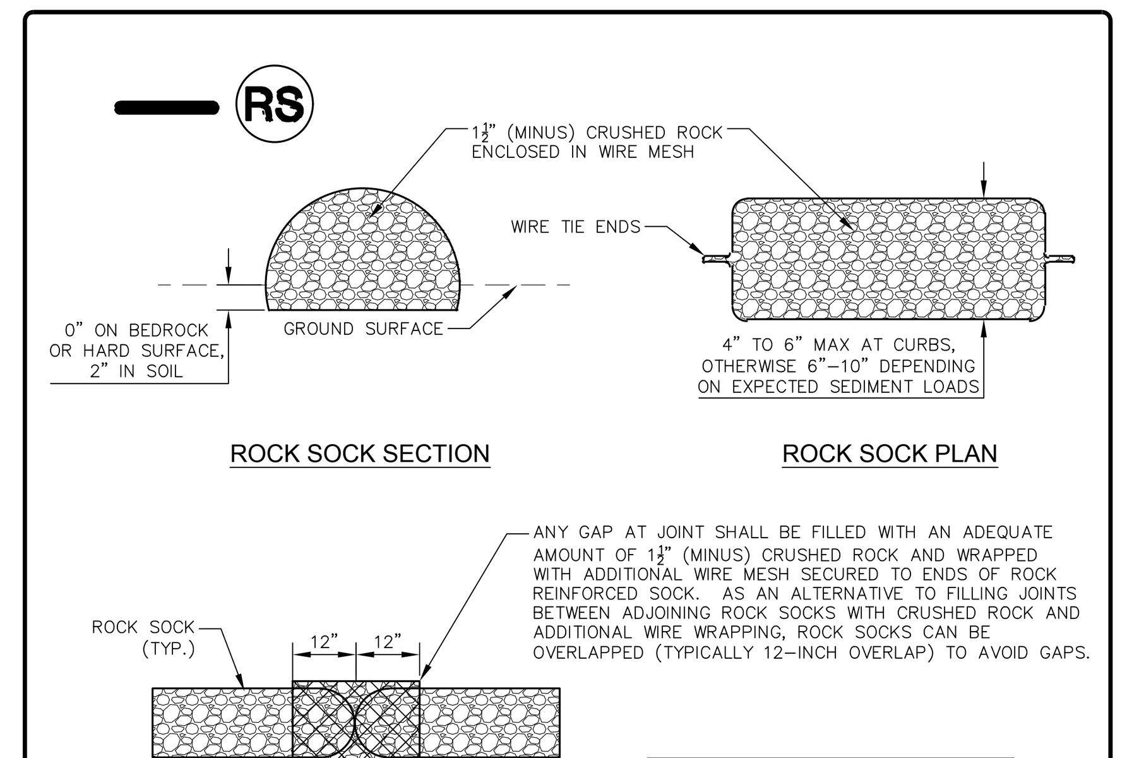


NOTES:

1. CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
2. VEHICLE TRACKING CONTROL IS REQUIRED IF ACCESS TO CONCRETE WASHOUT AREA IS OFF PAVEMENT.
3. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
4. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
5. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN ACCEPTED WASTE SITE.
6. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER ACCEPTED BY THE CITY.
7. LOCATION OF CONCRETE WASHOUT AREA IS CONCEPTUAL ONLY. FINAL LOCATION TO BE DETERMINED IN THE FIELD AT CONTRACTOR'S DISCRETION.

CWA

06 / EC2 — CONCRETE WASHOUT AREA — NOT TO SCALE



GRADATION TABLE

SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES NO. 4
2"	100
1-1/2"	90-100
1"	20-55
3/4"	0-15
3/8"	0-5

MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES

ROCK SOCK INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   – LOCATION (S) OF ROCK SOCKS.
2. CRUSHED ROCK SHALL BE 1½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1½" MINUS).
3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF ½", RECOMMENDED MINIMUM ROLL WIDTH OF 48".
4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.
5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE.

07 / EC2 — ROCK SOCK — NOT TO SCALE

CALL UTILITY NOTIFICATION CENTER OF COLORADO

811 Know what's below. Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED:	City Engineer	Date
CHECKED BY:	Water & Wastewater Utility	Date
CHECKED BY:	Stormwater Utility	Date
CHECKED BY:	Parks & Recreation	Date
CHECKED BY:	Traffic Engineer	Date
CHECKED BY:	Environmental Planner	Date

REVIEW SET
NOT FOR CONSTRUCTION
02/11/15

No. | Revisions: | By: | Date:

These drawings are instruments of service provided by Northern Engineering Services, Inc. and are not to be used for any type of construction unless signed and sealed by a Professional Engineer in the employ of Northern Engineering Services, Inc.

NORTHERN ENGINEERING
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521
PHONE: 970.221.4158
www.northernengineering.com

PROJECT: 820-004
DATE: February 11, 2015
DESIGNED BY: A. Reese
SCALE: N/A
DRAWN BY: A. Reese
REVIEWED BY: N. Haws

HILL POND RESIDENCES
EROSION CONTROL DETAILS

Sheet EC2
Of 15 Sheets

NORTHERN ENGINEERING

January 21, 2015

PRELIMINARY DRAINAGE REPORT

HILL POND RESIDENCES

Fort Collins, Colorado

Prepared for:
Catamount Properties Ltd.
7302 Rozena Drive
Longmont, Colorado 80503

Prepared by:

NORTHERN ENGINEERING
301 N. Howes Street, Suite 100
Fort Collins, Colorado 80521
Phone: 970.221.4158
www.northernengineering.com

Project Number: 620-004

NORTHERN ENGINEERING

January 21, 2015

City of Fort Collins
Stormwater Utility
700 Wood Street
Fort Collins, Colorado 80521

RE: Preliminary Drainage Report for
Hill Pond Residences

Dear Staff:

Northern Engineering is pleased to submit this Preliminary Drainage Report for your review. This report accompanies the Preliminary Development submittal for the proposed Hill Pond Residences development.

This report has been prepared in accordance with the Fort Collins Stormwater Criteria Manual (FCSCM), and serves to document the stormwater impacts associated with the proposed *Hill Pond Residences* project. We understand that review by the City of Fort Collins is to assure general compliance with standardized criteria contained in the FCSCM.

If you should have any questions as you review this report, please feel free to contact us.

Sincerely,

NORTHERN ENGINEERING SERVICES, INC.

Nicholas W. Haws, PE
Vice President

LEED AP

Andrew Reese
Project Engineer

TABLE OF CONTENTS

APPENDICES:

MAP POCKET:

I. GENERAL LOCATION AND DESCRIPTION

A. Location

1. Vicinity Map

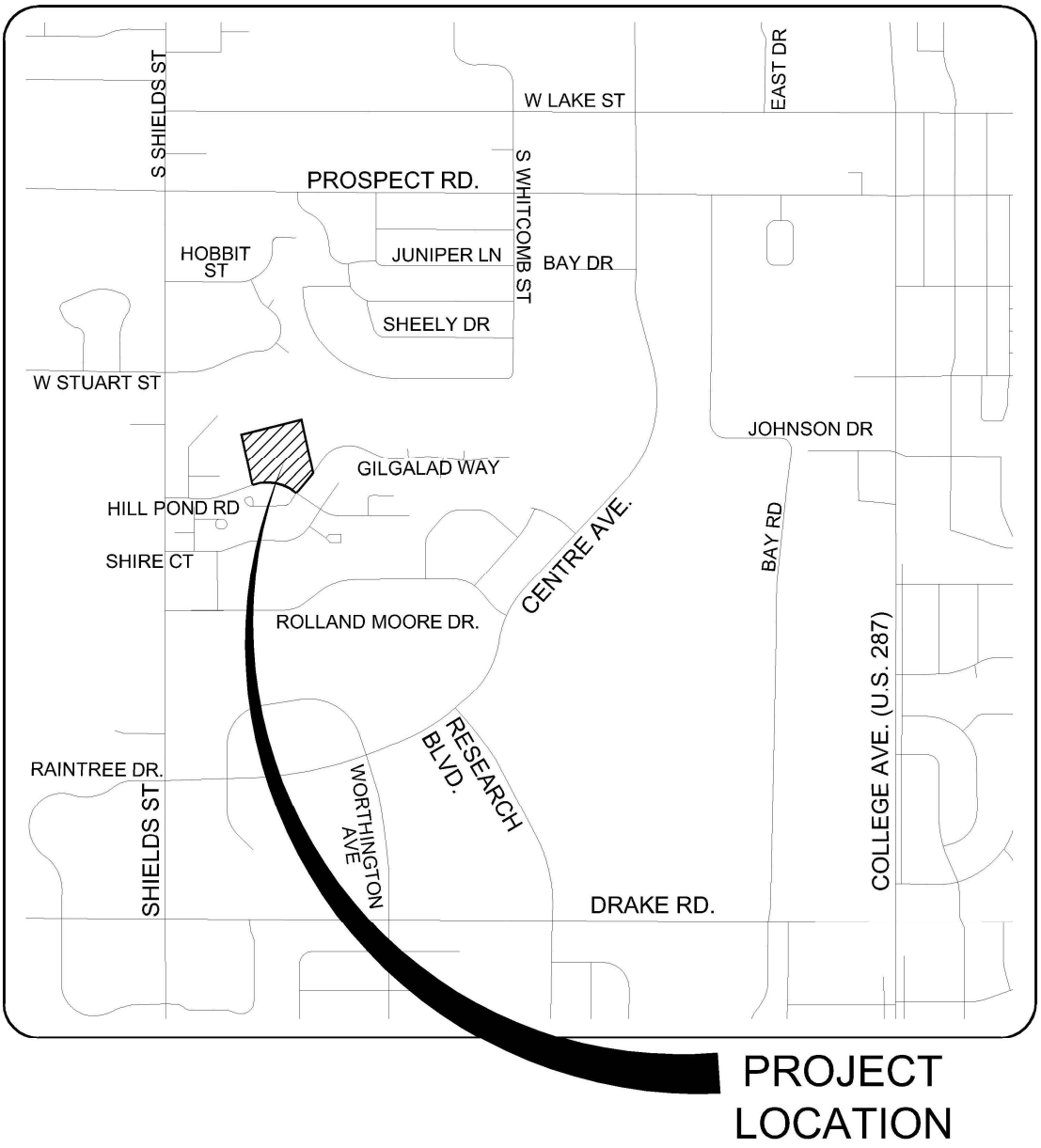


Figure 1 – Vicinity Map

2. The Hill Pond Residences project site is located in the Northwest quarter of Section 23, Township 7 North, Range 69 West of the 6th Principal Meridian, City of Fort Collins, County of Larimer, State of Colorado.

3. The project site (refer to Figure 1) is bordered to the north by a single family residence; to the south by Hill Pond Road; to the east by Gilgalad Way; and to the west by existing single family residences.

4. There are no major drainageways within or adjacent to the site.

B. Description of Property

1. Hill Pond Residences is comprised of ±2.179 acres.

2. The site is currently a single family residence. It was originally developed as a neighborhood amenity with two tennis courts, a pool and large green spaces.

Figure 2 – Aerial Photograph

3. The existing groundcover consists of grasses, gravel and concrete.

4. The existing on-site runoff generally drains to both the northeast as well as the southwest due to a ridge that bisects the property. Flows draining to the northeast corner are collected by a series of existing low areas that do not have an outfall to any established drainage facilities. Drainage to the southeast flows to Hill Pond Road and Gilgalad Way. Those flows are collected by an existing inlet on the northeast corner of the intersection which conveys flows to Spring Creek.

5. A soils report letter (Project No. FC06692-115 | Date: September 16, 2014) was completed by CTL|Thompson, Inc. The report letter contains the preliminary results of a complete geotechnical subsurface exploration as well as pertinent geotechnical recommendations. According to the summary of findings presented in the aforementioned report,

   "Strata encountered in our exploratory borings generally consisted of approximately 0-4-1/2 feet of clay and sand fill, underlain by natural sandy clay and clayey sand soils which extended approximately 18 to 21 feet."

6. There are no major drainageways within or adjacent to the project site.

7. The proposed Hill Pond Residences development will consist of 8 residential buildings that are single family attached units. Other proposed improvements include: a new concrete and permeable Modular Block Paver (MBP) parking area and landscaping.

8. The proposed land use is residential, single-family attached. This is a permitted use in the Medium Density Mixed Use Neighborhood District (MMN).

C. Floodplain

1. The subject property is **not** located in a FEMA regulatory or City of Fort Collins designated floodplain. In particular, the project site is not located within a FEMA designated 100-year floodplain per Map Number 08069C0987G (Effective date: May 2, 2012).

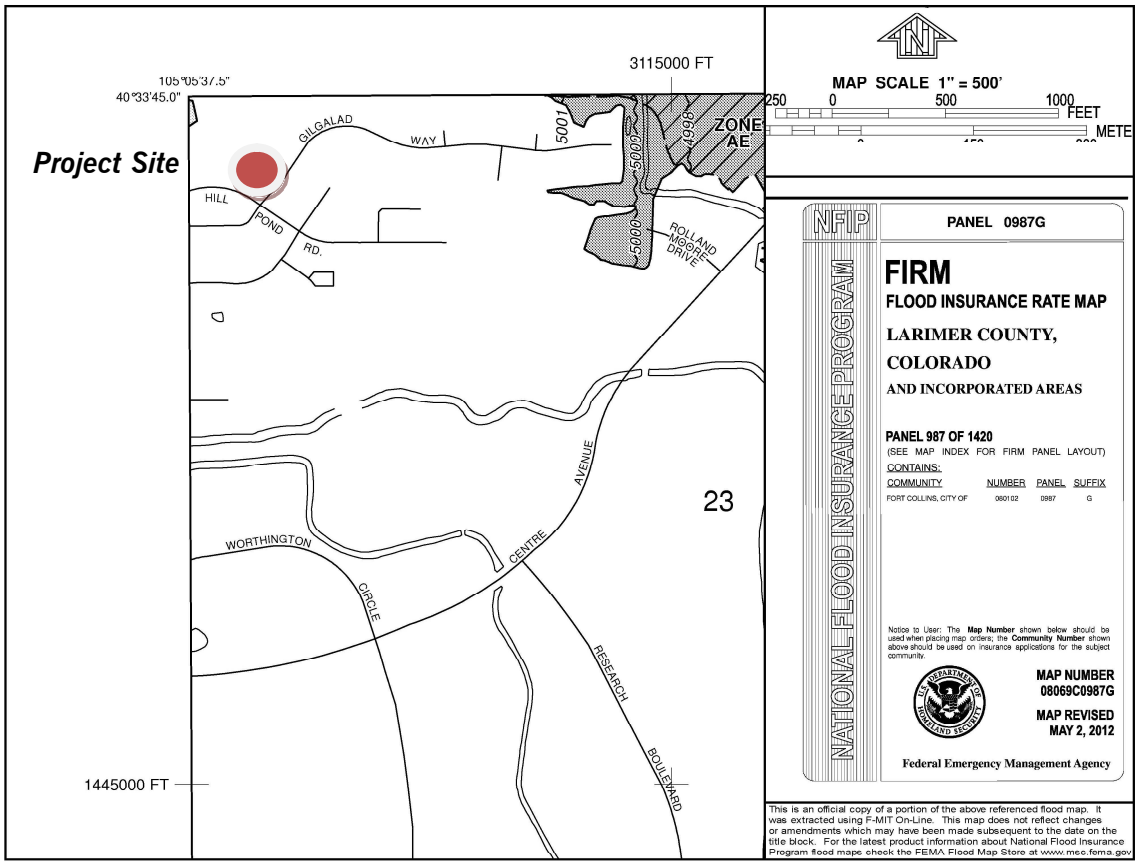


Figure 4 – FEMA Firmette (Map Number 08069C0987G)

II. DRAINAGE BASINS AND SUB-BASINS

A. Major Basin Description

1. Hill Pond Residences is located within the City of Fort Collins Spring Creek major drainage basin. Specifically, the project site is situated in the central portion of this major drainage basin. This basin is located in central Fort Collins and has a drainage area of approximately 5,656 acres. The Spring Creek major drainage basin generally drains from west to east. Most of the runoff from the Spring Creek major drainage basin drains into the Poudre River.

B. Sub-Basin Description

1. Outfalls: There are two existing outfall locations for the project. The first outfall for the project site is a series of localized low points along the eastern boundary of the project. The second outfall location for the project is the existing curb and gutter along Gilgalad Way, along the southeastern boundary of the project site.

2. The existing subject site can be defined with two (2) sub-basins. Refer to the Existing Drainage Exhibit for additional information.
    - Sub-basin EX1 delineates the northern portion of the existing project site, which was used to approximate the 2- and 100-year existing runoff. Drainage from the basin generally flows to the northeast, and is collected in localized low-points along the eastern boundary of the site.
    - Sub-basin EX2 delineates the southern portion of the existing project site and was used to approximate the 2- and 100-year existing runoff. Drainage from the basin generally flows to the southeast and is collected by Gilgalad Way and Hill Pond Road, which then conveys flows to the existing inlet on the northeast corner of the intersection.

3. The project site does not receive notable runoff from contiguous off-site properties.

III. DRAINAGE DESIGN CRITERIA

A. There are no optional provisions outside of the FCSCM proposed with Hill Pond Residences.

B. The overall stormwater management strategy employed with Hill Pond Residences utilizes the "Four Step Process" to minimize adverse impacts of urbanization on receiving waters. The following is a description of how the proposed development has incorporated each step.

Step 1 – Employ Runoff Reduction Practices. The first consideration taken in trying to reduce the stormwater impacts of this development is the site selection itself. By choosing an already developed site with public storm sewer currently in place, the burden is significantly less than developing a vacant parcel absent of any infrastructure.

Hill Pond Residences aims to reduce runoff peaks, volumes and pollutant loads from frequently occurring storm events (i.e., water quality (i.e., 80th percentile) and 2-year storm events) by implementing Low Impact Development (LID) strategies. Wherever practical, runoff will be routed across landscaped areas or Modular Block Pavers (MBPs). This LID practice reduces the overall amount of impervious area, while at the same time Minimizing Directly Connected Impervious Areas (MDCIA). The combined LID/MDCIA techniques will be implemented, where practical, throughout the development, thereby slowing runoff and increasing opportunities for infiltration.

Step 2 – Implement BMPs That Provide a Water Quality Capture Volume (WQCV) with Slow Release. The efforts taken in Step 1 will help to minimize excess runoff from frequently occurring storm events; however, urban development of this intensity will still have stormwater runoff leaving the site. The primary water quality treatment will occur in the Modular Block Paver (MBP) section in sub-basin B.

Step 3 – Stabilize Drainageways. As stated in Section I.B.5, above, there are no major drainageways in or near the subject site. While this step may not seem applicable to Hill Pond Residences, the proposed project indirectly helps achieve stabilized drainageways nonetheless. Once again, site selection has a positive effect on stream stabilization. By developing an infill site with existing stormwater infrastructure, combined with LID and MDCIA strategies, the likelihood of bed and bank erosion is reduced. Furthermore, this project will pay one-time stormwater development fees, as well as ongoing monthly stormwater utility fees, both of which help achieve Citywide drainageway stability.

Step 4 – Implement Site Specific and Other Source Control BMPs. This step typically applies to industrial and commercial developments.

C. Development Criteria Reference and Existing Constraints

1. The subject property is not part of any Overall Development Plan (ODP) drainage study or similar "development/project" drainage master plan.

2. The site plan is constrained on two sides by public streets, as well as by existing undeveloped and developed sites along the remaining two sides. As previously mentioned, the drainage outfall for sub-basin EX1 is a series of localized low points along the eastern boundary of the project. Basin EX2 drains to the adjacent streets.

3. Peak runoff from the project site during the 2-year event will remain unchanged or decrease and will decrease during the 100-year storm event.

   During the 2-year storm event, runoff to the northeast will decrease from the current ±0.83 cfs to ±0.17 cfs; and during the 100-year storm event runoff will decrease from ±3.75 cfs to ±0.74 cfs.

   During the 2-year storm event, runoff to the southeast will remain unchanged from the current ±0.95 cfs; and during the 100-year storm event runoff will decrease from ±4.16 cfs to ±3.45 cfs.

D. Hydrological Criteria

1. The City of Fort Collins Rainfall Intensity-Duration-Frequency Curves, as depicted in Figure RA-16 of the FCSCM, serve as the source for all hydrologic computations associated with the Hill Pond Residences development. Tabulated data contained in Table RA-7 has been utilized for Rational Method runoff calculations.

2. The Rational Method has been employed to compute stormwater runoff utilizing coefficients contained in Tables RO-11 and RO-12 of the FCSCM.

3. The Rational Formula-based Federal Aviation Administration (FAA) procedure has utilized for detention storage calculations.

4. Two separate design storms have been utilized to address distinct drainage scenarios. The first event analyzed is the "Minor," or "Initial" Storm, which has a 2-year recurrence interval. The second event considered is the "Major Storm," which has a 100-year recurrence interval.

E. Hydraulic Criteria

1. The drainage facilities proposed with the Hill Pond Residences project are designed in accordance with criteria outlined in the FCSCM and/or the Urban Drainage and Flood Control District's (UDFCD) Urban Storm Drainage Criteria Manual.

2. As stated in Section I.C.1, above, the subject property is not located in a FEMA regulatory or a City of Fort Collins designated floodplain.

F. Floodplain Regulations Compliance

1. As previously mentioned, this project is not subject to any floodplain regulations.

G. Modifications of Criteria

1. No modifications are requested at this time.

H. Conformance with Low Impact Development (LID)

1. 30,843 sf of paving is proposed with this project, and of the total, 13,422 sf is proposed to be Modular Block Pavers (MBPs). This means that ± 44% of

the paved areas in the project are pervious, exceeding the minimum requirement of 25%.

2. The total project area is 94,912 sf. Of that area, 92,816 sf will be treated by LID techniques, primarily Modular Block Pavers (MBPs) or releasing flows into landscaped areas. This means that ± 98% of the site will be treated by LID-type technology, exceeding the minimum requirement of 50%.

IV. DRAINAGE FACILITY DESIGN

A. General Concept

1. The main objective of the Hill Pond Residences drainage design is to maintain existing drainage patterns, while not adversely impacting adjacent properties.

2. No notable off-site runoff passes directly through the project site.

3. A list of tables and figures used within this report can be found in the Table of Contents at the front of the document. The tables and figures are located within the sections to which the content best applies.

4. The project site has been divided into three (3) drainage sub-basins, designated as sub-basins A, B & C. The drainage patterns anticipated for each basin are further described below.

   Sub-Basin A
   Sub-basin A encompasses ±10 percent of the total site area and runs along the north and east sides of the property. This sub-basin is comprised of landscaping and private concrete patios. This basin will continue to surface drain along the boundary of the project at a decreased 2-year release rate of 0.17 cfs. The basin release rate will also be reduced in the 100-yr event to a rate of 0.74 cfs.

   Sub-Basin B
   Sub-basin B encompasses ±60 percent of the total site area. This sub-basin is comprised of roof area, landscaping and the on-site parking area. This parking area will be a mix of concrete and Modular Block Pavers (MBPs). Detention will be provided within in the MBPs ($WSEL_{100\text{-}year}$=5012.63±). The detained flows will then be directed to the existing curb and gutter along Gilgalad Way. This basin will release at an adjusted 2-year rate of 0.95 cfs through an orifice plate in the 100-yr event. An outlet orifice cap located on the east wall of the proposed drain basin will be used to control the flow rate. See Section B.1 for details on how the release rate was calculated.

   Sub-Basin C
   Sub-basin C encompasses the western and southern edge of the project site along the Hill Pond and Gilgalad Way frontage. It is comprised of public sidewalks and landscaping, as well as the proposed entry drive. This basin will continue to surface drain along the boundary of the project at a decreased 2-year release rate of 0.56 cfs. The basin release rate will also be reduced in the 100-yr event to a rate of 0.2.50 cfs.

   A full-size copy of the Drainage Exhibit can be found in the Map Pocket at the end of this report.

B. Specific Details

1. The release rate for the MBP detention area was determined by calculating the existing C-value for the entire existing project site (C_2=0.37) and multiplying that value by the area of Sub-Basin B (1.46 acres) and by the 2-yr intensity factor (1.75). The result is 0.95 cfs. The other areas of the project are not

being significantly affected by development of the site due to the existing of many large trees on the site and a desire to preserve as many as possible. As such, these areas will continue to release at levels similar to their existing condition. In total, the project site will maintain its total release in the 2-year event at 1.78 cfs and will decrease the total release in the 100-yr event from the existing 7.91 cfs to 4.19 cfs in the developed condition.

2. The FAA method was used to size the on-site pond for quantity detention. Calculations for this area, based on the characteristics of sub-basin B and adjusted release rate, indicate a detention volume of 11,342 cu. ft. This includes 2,091 cu. ft. of Water Quality Capture Volume (WQCV). During water quality events the water quality capture volume will release over 12-hours. There is no-infiltration accounted for with this design.

3. The storage volume available within the reservoir area (i.e., No. 57 and No. 2 open-graded aggregate) of the MBP section is ±11,378 cu. ft. at WSEL 5012.63. The MBP section is designed with an increased No.2, open-graded aggregate, material depth in order to provide storage for storm events in excess of the water quality (80th percentile) storm event. This volume assumes a 30% void space in the open-graded aggregates per City requirements.

4. A Drain Basin is located at the downstream end of the parking area. This basin will have an orifice cap installed on the east wall that will limit the release from the site to the maximum allowable release rate (0.95 cfs).

5. The majority of roof drain downspouts will discharge into the MBP section. The remaining downspouts will release into landscaped areas.

6. The emergency spill path will be from the parking area onto the lot line, where flows will proceed along the historic path north and east until they spill into undeveloped areas north of the project site.

V. CONCLUSIONS

A. Compliance with Standards

1. The design elements comply without variation, and meet all LID requirements.

2. The drainage design proposed with Hill Pond Residences complies with the City of Fort Collins Master Drainage Plan for the Spring Creek Major Drainage Basin.

3. There are no regulatory floodplains associated with the Hill Pond Residences development.

4. The drainage plan and stormwater management measures proposed with the Hill Pond Residences project are compliant with all applicable State and Federal regulations governing stormwater discharge.

B. Drainage Concept

1. The drainage design proposed with this project will effectively limit potential damage associated with its stormwater runoff. Hill Pond Residences will detain for the pervious area converted to impervious areas to release at the 2-year existing rate during the 2-year storm and at a significantly decreased rate during the 100-yr storm.

2. The proposed Hill Pond Residences development will not impact the Master Drainage Plan recommendations for the Spring Creek Major Drainage Basin.

References

1. City of Fort Collins Landscape Design Guidelines for Stormwater and Detention Facilities, November 5, 2009, BHA Design, Inc. with City of Fort Collins Utility Services.

2. Fort Collins Stormwater Criteria Manual, City of Fort Collins, Colorado, as adopted by Ordinance No. 174, 2011, and referenced in Section 26-500 (c) of the City of Fort Collins Municipal Code.

3. Preliminary Geotechnical Investigation – Proposed Hill Pond Project, September 16, 2014, CTL | Thompson, Inc. (Project No. FC006692-115).

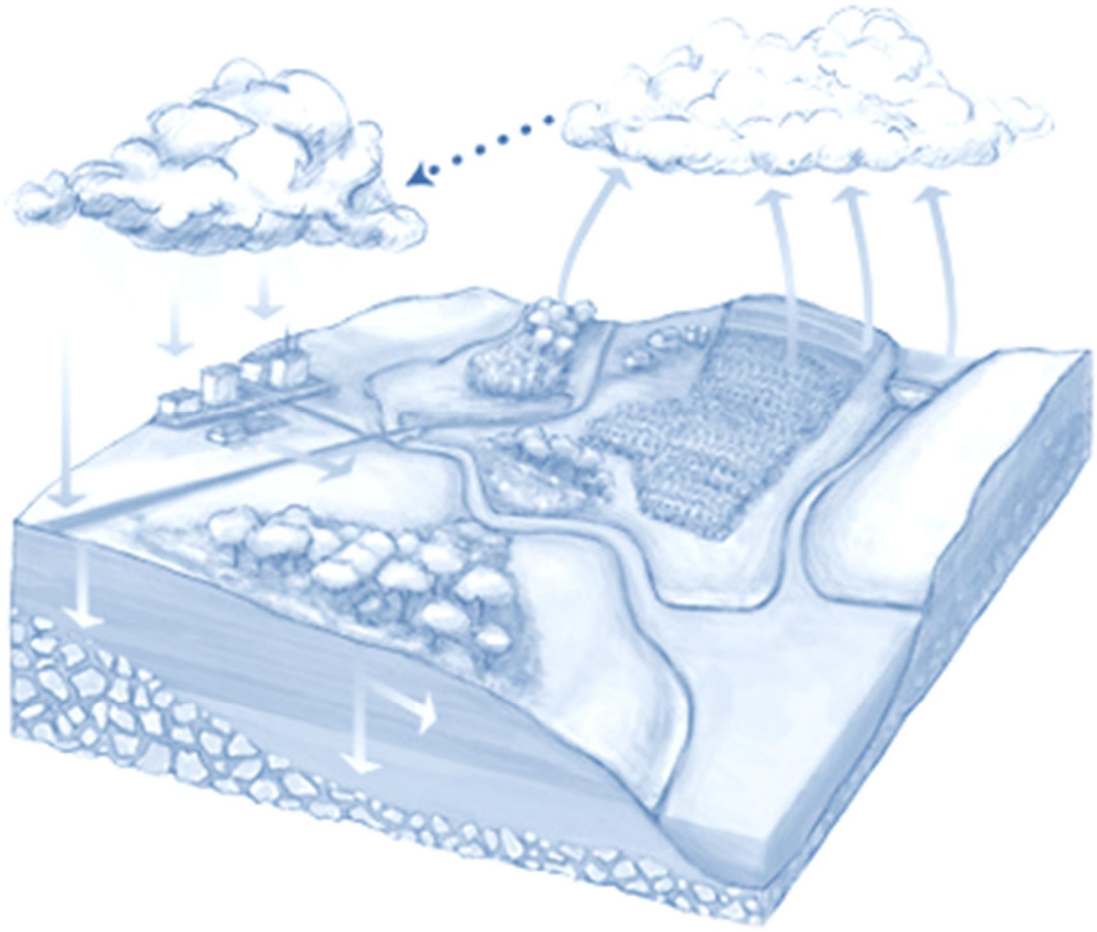
4. Soils Resource Report for Larimer County Area, Colorado, Natural Resources Conservation Service, United States Department of Agriculture.

5. Urban Storm Drainage Criteria Manual, Volumes 1-3, Urban Drainage and Flood Control District, Wright-McLaughlin Engineers, Denver, Colorado, Revised April 2008.

NORTHERN ENGINEERING

APPENDIX A

HYDROLOGIC COMPUTATIONS



EXISTING COMPOSITE % IMPERVIOUSNESS AND RUNOFF COEFFICIENT CALCULATIONS

CHARACTER OF SURFACE:	**Runoff Coefficient**	**Percentage Impervious**
Streets, Parking Lots, Roofs, Alleys, and Drives:		
Asphalt	0.95	100
Concrete	0.95	90
Gravel	0.50	40
Roofs	0.95	90
Concrete Pavers	0.40	22
Lawns and Landscaping		
Sandy Soil	0.15	0
Clayey Soil	0.25	0

Project: Hill Pond Residences
Calculations By: A. Reese
Date: January 21, 2015

2-year C_f = 1.00 10-year C_f = 1.00 100-year C_f = 1.25

Runoff Coefficients are taken from the City of Fort Collins Storm Drainage Design Criteria and Construction Standards, Table 3-3. % Impervious taken from UDFCD USDCM, Volume I.

Basin ID	**Basin Area (s.f.)**	**Basin Area (ac)**	**Area of Asphalt (ac)**	**Area of Concrete (ac)**	**Area of Roofs (ac)**	**Area of Gravel (ac)**	**Area of Concrete Pavers (ac)**	**Area of Lawns and Landscaping (ac)**	**2-year Composite Runoff Coefficient**	**10-year Composite Runoff Coefficient**	**100-year Composite Runoff Coefficient**	**Composite % Imperv.**
EX1	53,708	1.23	0.00	0.33	0.02	0.01	0.01	0.85	0.39	0.39	0.48	26.5
EX2	41,204	0.95	0.02	0.15	0.04	0.06	0.00	0.67	0.35	0.35	0.44	23.2

EXISTING TIME OF CONCENTRATION COMPUTATIONS

Overland Flow, Time of Concentration:

$$T_i = \frac{1.87(1.1 - C * Cf)\sqrt{L}}{S^{1/3}}$$

Gutter/Swale Flow, Time of Concentration:

$T_t = L / 60V$

$T_c = T_i + T_t$ (Equation RO-2)

Velocity (Gutter Flow), $V = 20 \cdot S^{½}$

Velocity (Swale Flow), $V = 15 \cdot S^{½}$ } (Equation RO-4)

Hill Pond Residences

Table 3-4

RATIONAL METHOD FREQUENCY ADJUSTMENT FACTORS

Storm Return Period (years)	Frequency Factor C_f
2 to 10	1.00
11 to 25	1.10
26 to 50	1.20
51 to 100	1.25

Note: The product of C times C_f shall not exceed 1.00

Project: Hill Pond Residences
Calculations By: A. Reese
Date: January 21, 2015

NOTE: C-value for overland flows over grassy surfaces; C = 0.25

Design Point	Basin	Overland Flow									Gutter Flow				Swale Flow				Time of Concentration		
		Is Length >500' ?	C*C_f (2-yr C_f=1.00)	C*C_f (10-yr C_f=1.00)	C*C_f (100-yr C_f=1.25)	Length, L (ft)	Slope, S (%)	T_i *2-yr* (min)	T_i *10-yr* (min)	T_i *100-yr* (min)	Length, L (ft)	Slope, S (%)	Velocity, V (ft/s)	T_t (min)	Length, L (ft)	Slope, S (%)	Velocity, V (ft/s)	T_t (min)	2-yr T_c (min)	10-yr T_c (min)	100-yr T_c (min)
EX1	EX1	No	0.25	0.25	0.31	284	3.6	17.4	17.4	16.2	0	0.0	0.00	N/A	0	0.0	0.00	N/A	17.4	17.4	16.2
EX2	EX2	No	0.25	0.25	0.31	13	5.3	3.3	3.3	3.1	0	0.0	0.00	N/A	0	0.0	0.00	N/A	5.0	5.0	5.0

EXISTING RUNOFF COMPUTATIONS

Hill Pond Residences

Project: Hill Pond Residences
Calculations By: A. Reese
Date: January 21, 2015

Rational Method Equation:

$$Q = C_f(C)(i)(A)$$

From Section 3.2.1 of the CFCSDDC

Table 3-4

RATIONAL METHOD FREQUENCY ADJUSTMENT FACTORS

Storm Return Period (years)	Frequency Factor C_f
2 to 10	1.00
11 to 25	1.10
26 to 50	1.20
51 to 100	1.25

Note: The product of C times C_f shall not exceed 1.00

Rainfall Intensity:

Rainfall Intensity taken from the City of Fort Collins Storm Drainage Design Criteria (CFCSDDC), Figure 3.1

Design Point	Basin(s)	Area, A (acres)	2-yr T_c (min)	10-yr T_c (min)	100-yr T_c (min)	C_2	C_{10}	C_{100}	Intensity, i_2 (in/hr)	Intensity, i_{10} (in/hr)	Intensity, i_{100} (in/hr)	Flow, Q_2 (cfs)	Flow, Q_{10} (cfs)	Flow, Q_{100} (cfs)
EX1	EX1	1.23	17.4	17.4	16.2	0.39	0.39	0.48	1.75	2.99	6.30	0.83	1.42	3.75
EX2	EX2	0.95	5.0	5.0	5.0	0.35	0.35	0.44	2.85	4.87	9.95	0.95	1.63	4.16

0.81
0.37

EXISTING RUNOFF SUMMARY TABLE

DESIGN POINT	BASIN ID	TOTAL AREA (acres)	C_2	C_{10}	C_{100}	2-yr T_c (min)	10-yr T_c (min)	100-yr T_c (min)	Q_2 (cfs)	Hill Pond Residences	Q_{100} (cfs)
EX1	EX1	1.23	0.39	0.39	0.48	17.4	17.4	16.2	0.83	1.42	3.75
EX2	EX2	0.95	0.35	0.35	0.44	5.0	5.0	5.0	0.95	1.63	4.16

DEVELOPED COMPOSITE % IMPERVIOUSNESS AND RUNOFF COEFFICIENT CALCULATIONS

CHARACTER OF SURFACE:	**Runoff Coefficient**	**Percentage Impervious**
Streets, Parking Lots, Roofs, Alleys, and Drives:		
Asphalt	0.95	100
Concrete	0.95	90
Gravel	0.50	40
Roofs	0.95	90
Concrete Pavers	0.40	22
Lawns and Landscaping		
Sandy Soil	0.15	0
Clayey Soil	0.25	0

Project: Hill Pond Residences
Calculations By: A. Reese
Date: January 21, 2015

2-year C_f = 1.00 10-year C_f = 1.00 100-year C_f = 1.25

Runoff Coefficients are taken from the City of Fort Collins Storm Drainage Design Criteria and Construction Standards, Table 3-3. % Impervious taken from UDFCD USDCM, Volume I.

Basin ID	Basin Area (s.f.)	Basin Area (ac)	Area of Asphalt (ac)	Area of Concrete (ac)	Area of Roofs (ac)	Area of Gravel (ac)	Area of Concrete Pavers (ac)	Area of Lawns and Landscaping (ac)	2-year Composite Runoff Coefficient	10-year Composite Runoff Coefficient	100-year Composite Runoff Coefficient	Composite % Imperv.
A	7,974	0.18	0.00	0.02	0.00	0.00	0.00	0.16	0.33	0.33	0.41	9.8
B	63,546	1.46	0.00	0.32	0.67	0.00	0.31	0.17	0.75	0.75	0.94	65.5
C	23,392	0.54	0.00	0.08	0.05	0.00	0.00	0.40	0.42	0.42	0.53	22.3
TOTAL ONSITE	**94,912**	**2.18**	**0.00**	**0.40**	**0.72**	**0.00**	**0.31**	**0.73**	**0.63**	**0.63**	**0.79**	**49.3**

DEVELOPED TIME OF CONCENTRATION COMPUTATIONS

Overland Flow, Time of Concentration:

$$T_i = \frac{1.87(1.1 - C * Cf)\sqrt{L}}{S^{1/3}}$$

Gutter/Swale Flow, Time of Concentration:

$T_t = L / 60V$

$T_c = T_i + T_t$ (Equation RO-2)

Velocity (Gutter Flow), $V = 20 \cdot S^{½}$

Velocity (Swale Flow), $V = 15 \cdot S^{½}$ } (Equation RO-4)

Table 3-4

RATIONAL METHOD FREQUENCY ADJUSTMENT FACTORS

Storm Return Period (years)	Frequency Factor C_f
2 to 10	1.00
11 to 25	1.10
26 to 50	1.20
51 to 100	1.25

Note: The product of C times C_f shall not exceed 1.00

Project: Hill Pond Residences
Calculations By: A. Reese
Date: January 21, 2015

NOTE: C-value for overland flows over grassy surfaces; C = 0.25

Design Point	Basin	Overland Flow										Gutter Flow				Swale Flow				Time of Concentration		
		Is Length >500' ?	C*C_f (2-yr C_f=1.00)	C*C_f (10-yr C_f=1.00)	C*C_f (100-yr C_f=1.25)	Length, L (ft)	Slope, S (%)	T_i *2-yr* (min)	T_i *10-yr* (min)	T_i *100-yr* (min)	Length, L (ft)	Slope, S (%)	Velocity, V (ft/s)	T_t (min)	Length, L (ft)	Slope, S (%)	Velocity, V (ft/s)	T_t (min)	2-yr T_c (min)	10-yr T_c (min)	100-yr T_c (min)
A	A	No	0.25	0.25	0.31	10	15.0	2.0	2.0	1.9	0	0.0	0.00	N/A	248	4.0	3.00	1.4	5.0	5.0	5.0
B	B	No	0.95	0.95	1.00	113	0.5	3.8	3.8	2.5	174	0.5	1.41	2.1	0	0.0	0.00	N/A	5.8	5.8	5.0
C	C	No	0.25	0.25	0.31	26	3.8	5.2	5.2	4.8	0	0.0	0.00	N/A	217	1.0	1.50	2.4	7.6	7.6	7.2

DEVELOPED RUNOFF COMPUTATIONS

Rational Method Equation:

$$Q = C_f(C)(i)(A)$$

From Section 3.2.1 of the CFCSDDC

Table 3-4

RATIONAL METHOD FREQUENCY ADJUSTMENT FACTORS

Storm Return Period (years)	Frequency Factor C_f
2 to 10	1.00
11 to 25	1.10
26 to 50	1.20
51 to 100	1.25

Note: The product of C times C_f shall not exceed 1.00

Project: Hill Pond Residences
Calculations By: A. Reese
Date: January 21, 2015

Rainfall Intensity:

Rainfall Intensity taken from the City of Fort Collins Storm Drainage Design Criteria (CFCSDDC), Figure 3.1

Design Point	Basin(s)	Area, A (acres)	2-yr T_c (min)	10-yr T_c (min)	100-yr T_c (min)	C_2	C_{10}	C_{100}	Intensity, i_2 (in/hr)	Intensity, i_{10} (in/hr)	Intensity, i_{100} (in/hr)	Flow, Q_2 (cfs)	Flow, Q_{10} (cfs)	Flow, Q_{100} (cfs)
A	A	0.18	5.0	5.0	5.0	0.33	0.33	0.41	2.85	4.87	9.95	0.17	0.29	0.74
B	B	1.46	5.8	5.8	5.0	0.75	0.75	0.94	2.76	4.72	9.95	3.04	5.19	13.69
C	C	0.54	7.6	7.6	7.2	0.42	0.42	0.53	2.46	4.21	8.80	0.56	0.96	2.50

DEVELOPED RUNOFF SUMMARY TABLE

DESIGN POINT	BASIN ID	TOTAL AREA (acres)	C_2	C_{10}	C_{100}	2-yr T_c (min)	10-yr T_c (min)	100-yr T_c (min)	Q_2 (cfs)	Q_{10} (cfs)	Q_{100} (cfs)
A	A	0.18	0.33	0.33	0.41	5.0	5.0	5.0	0.17	0.29	0.74
B	B	1.46	0.75	0.75	0.94	5.8	5.8	5.0	3.04	5.19	13.69
C	C	0.54	0.42	0.42	0.53	7.6	7.6	7.2	0.56	0.96	2.50

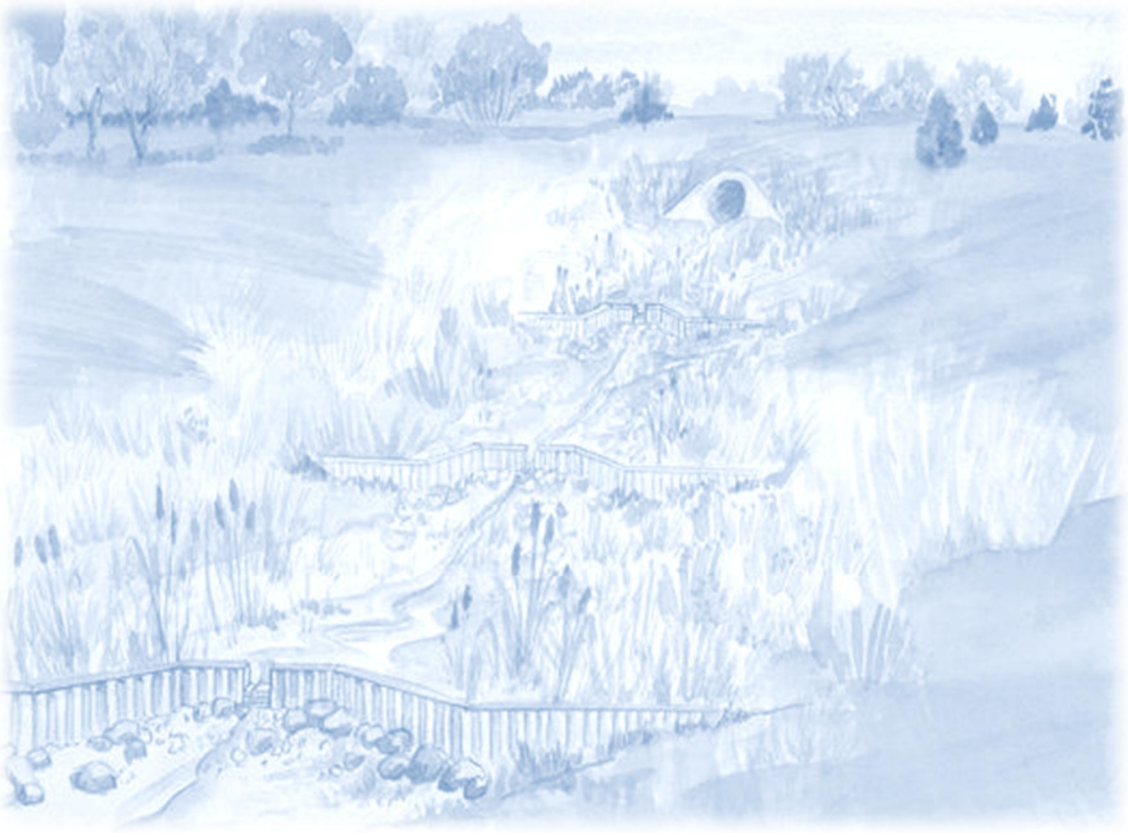
NORTHERN ENGINEERING

APPENDIX B

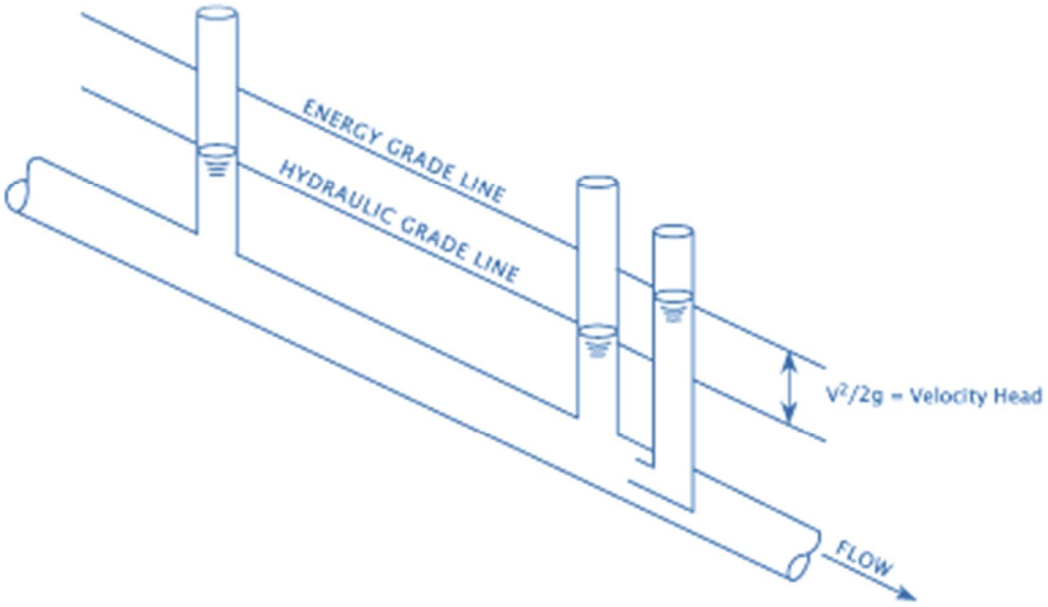
HYDRAULIC COMPUTATIONS

B.1 – Storm Sewers

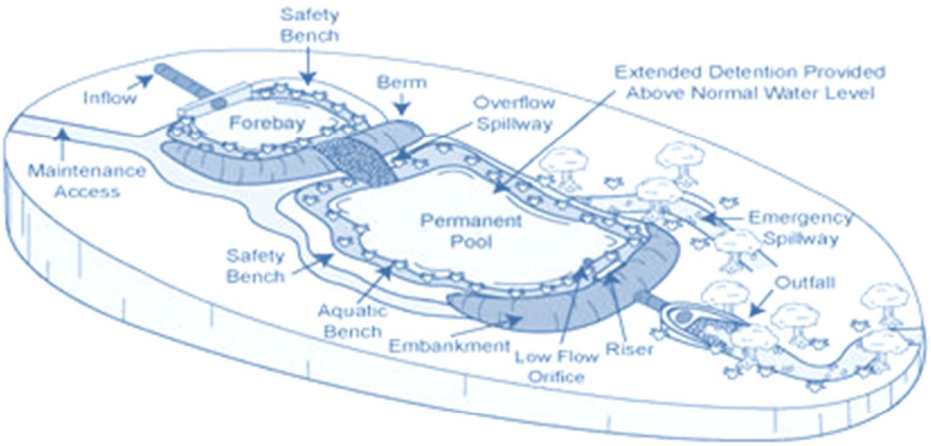
B.2 – Detention Facilities

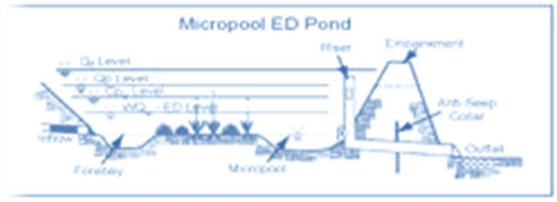


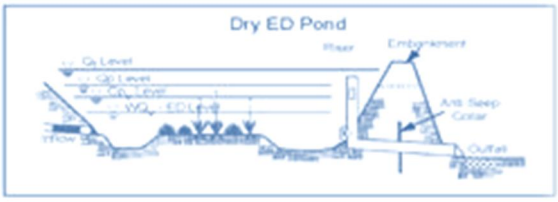
APPENDIX B.1
STORM SEWERS

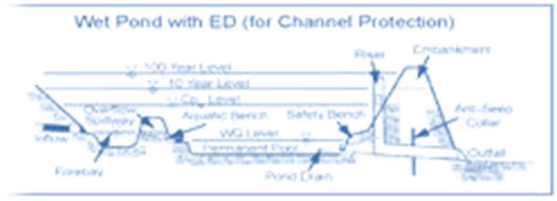


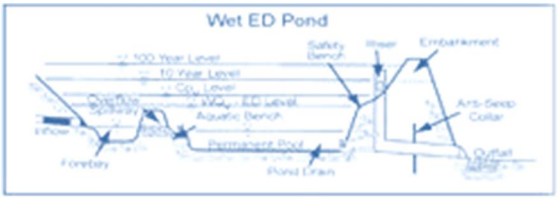
APPENDIX B.2
DETENTION FACILITIES

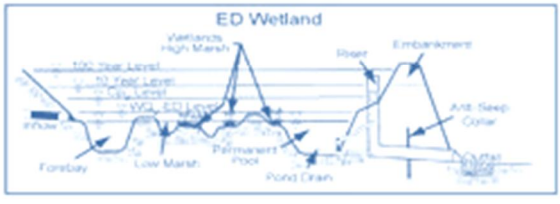












NORTHERN ENGINEERING

Detention Pond Calculation | FAA Method

Project: Hill Pond Residences
Project Location: Fort Collins, Colorado
Calculations By: A. Reese **Date:** January 21, 2015
Pond No.: Paver Parking

Input Variables			Results		
Design Point	B				
Design Storm	100-yr		**Required Detention Volume**		
Developed "C" =	0.94		WQCV	2091	ft^3
Area (A)=	1.46	acres	Quantity Detention	11342	ft^3
Max Release Rate =	0.95	cfs	Total Volume	**11342**	**ft^3**
			Total Volume	**0.260**	**ac-ft**

Time	Time	Ft.Collins 100-yr Intensity	Q_{100}	Inflow (Runoff) Volume	Outflow (Release) Volume	Storage Detention Volume
(mins)	(secs)	(in/hr)	(cfs)	(ft^3)	(ft^3)	(ft^3)
5	300	9.95	13.7	4097	285	3812
10	600	7.72	10.6	6357	570	5787
15	900	6.52	8.9	8053	855	7198
20	1200	5.60	7.7	9223	1140	8083
25	1500	4.98	6.8	10252	1425	8827
30	1800	4.52	6.2	11166	1710	9456
35	2100	4.08	5.6	11759	1995	9764
40	2400	3.74	5.1	12319	2280	10039
45	2700	3.46	4.7	12821	2565	10256
50	3000	3.23	4.4	13299	2850	10449
55	3300	3.03	4.2	13723	3135	10588
60	3600	2.86	3.9	14130	3420	10710
65	3900	2.72	3.7	14558	3705	10853
70	4200	2.59	3.6	14929	3990	10939
75	4500	2.48	3.4	15316	4275	11041
80	4800	2.38	3.3	15678	4560	11118
85	5100	2.29	3.1	16028	4845	11183
90	5400	2.21	3.0	16378	5130	11248
95	5700	2.13	2.9	16662	5415	11247
100	6000	2.06	2.8	16963	5700	11263
105	6300	2.00	2.7	17292	5985	11307
110	6600	1.94	2.7	17572	6270	11302
115	6900	1.89	2.6	17897	6555	11342
120	7200	1.84	2.5	18182	6840	11342
125	7500	1.79	2.5	18424	7125	11299
130	7800	1.75	2.4	18733	7410	11323
135	8100	1.71	2.3	19009	7695	11314
140	8400	1.67	2.3	19252	7980	11272
145	8700	1.63	2.2	19462	8265	11197
150	9000	1.60	2.2	19763	8550	11213
155	9300	1.57	2.2	20038	8835	11203
160	9600	1.54	2.1	20290	9120	11170
165	9900	1.51	2.1	20516	9405	11111
170	10200	1.48	2.0	20718	9690	11028
175	10500	1.45	2.0	20895	9975	10920
180	10800	1.42	1.9	21047	10260	10787
185	11100	1.40	1.9	21327	10545	10782
190	11400	1.38	1.9	21591	10830	10761
195	11700	1.36	1.9	21838	11115	10723
200	12000	1.34	1.8	22068	11400	10668
205	12300	1.32	1.8	22282	11685	10597
210	12600	1.30	1.8	22480	11970	10510
215	12900	1.28	1.8	22661	12255	10406
220	13200	1.26	1.7	22826	12540	10286
225	13500	1.24	1.7	22974	12825	10149
230	13800	1.22	1.7	23106	13110	9996
235	14100	1.21	1.7	23415	13395	10020
240	14400	1.20	1.6	23715	13680	10035

NORTHERN ENGINEERING

APPENDIX C

WATER QUALITY DESIGN COMPUTATIONS

WATER QUALITY CONTROL STRUCTURE PLATE
PAVER PARKING AREA

Project: Hill Pond Residences
By: A. Reese
January 21, 2014

REQUIRED STORAGE & OUTLET WORKS:

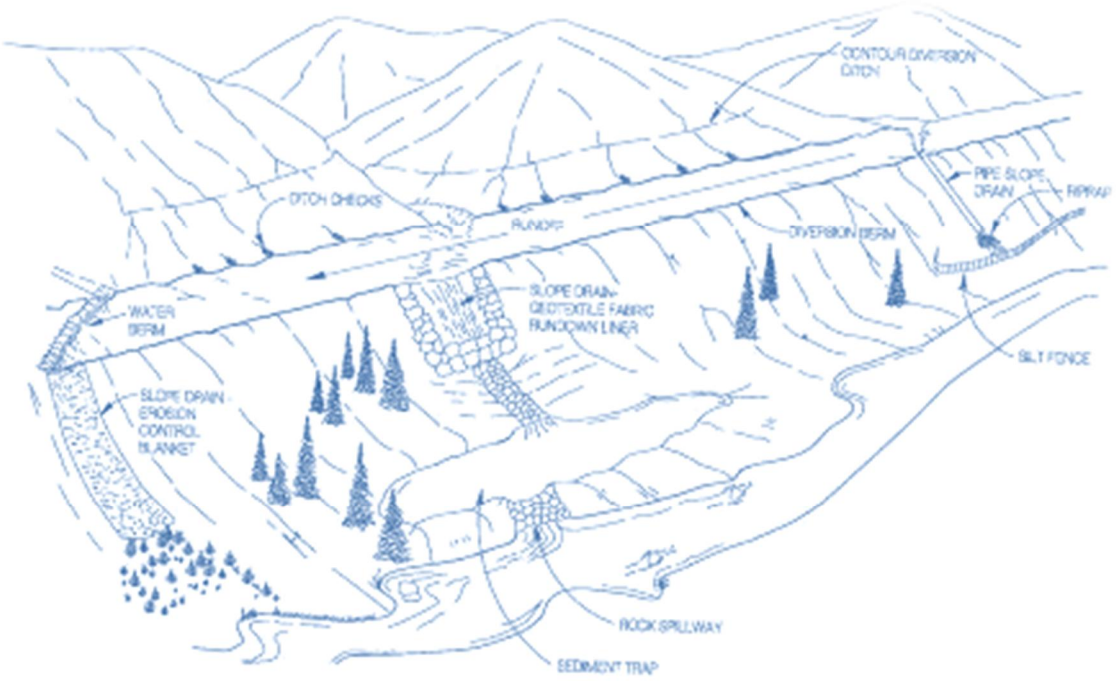
BASIN AREA =	1.200	<-- INPUT from impervious calcs
BASIN IMPERVIOUSNESS PERCENT =	100.00	<-- INPUT from impervious calcs
BASIN IMPERVIOUSNESS RATIO =	1.0000	<-- CALCULATED
Drain Time (hrs)	12	<-- INPUT
Drain Time Coefficient	0.8	<-- CALCULATED from Figure Table 3-2
WQCV (watershed inches) =	0.400	<-- CALCULATED from Figure EDB-2
WQCV (ac-ft) =	0.040	<-- CALCULATED from UDFCD DCM V.3 Section 6.5
Adjusted WQCV (ac-ft) =	0.048	<-- CALCULATED (20% Sedimentation Accumulation)
WQ Depth (ft) =	0.700	<-- INPUT from stage-storage table
AREA REQUIRED PER ROW, a (in^2) =	0.183	<-- CALCULATED from Figure EDB-3

CIRCULAR PERFORATION SIZING:

dia (in) =	1/2	<-- INPUT from Figure 5
number of rows =	2	
t (in) =	0.500	<-- INPUT from Figure 5
number of rows =	1.000	<-- CALCULATED from WQ Depth and row spacing

APPENDIX D

EROSION CONTROL REPORT



EROSION CONTROL REPORT

A comprehensive Erosion and Sediment Control Plan (along with associated details) will be included with the final construction drawings. It should be noted, however, that any such Erosion and Sediment Control Plan serves only as a general guide to the Contractor. Staging and/or phasing of the BMPs depicted, and additional or different BMPs from those included may be necessary during construction, or as required by the authorities having jurisdiction.

It shall be the responsibility of the Contractor to ensure erosion control measures are properly maintained and followed. The Erosion and Sediment Control Plan is intended to be a living document, constantly adapting to site conditions and needs. The Contractor shall update the location of BMPs as they are installed, removed or modified in conjunction with construction activities. It is imperative to appropriately reflect the current site conditions at all times.

The Erosion and Sediment Control Plan shall address both temporary measures to be implemented during construction, as well as permanent erosion control protection. Best Management Practices from the Volume 3, Chapter 7 – *Construction BMPs* will be utilized. Measures may include, but are not limited to, silt fencing and/or wattles along the disturbed perimeter, gutter protection in the adjacent roadways and inlet protection at existing and proposed storm inlets. Vehicle tracking control pads, spill containment and clean-up procedures, designated concrete washout areas, dumpsters, and job site restrooms shall also be provided by the Contractor.

Grading and Erosion Control Notes can be found on Sheet C001 of the Utility Plans. The Final Utility Plans will also contain a full-size Erosion Control Plan as well as a separate sheet dedicated to Erosion Control Details. In addition to this report and the referenced plan sheets, the Contractor shall be aware of, and adhere to, the applicable requirements outlined in any existing Development Agreement(s) of record, as well as the Development Agreement, to be recorded prior to issuance of the Development Construction Permit. Also, the Site Contractor for this project may be required to secure a Stormwater Construction General Permit from the Colorado Department of Public Health and Environment (CDPHE), Water Quality Control Division – Stormwater Program, before commencing any earth disturbing activities. Prior to securing said permit, the Site Contractor shall develop a comprehensive StormWater Management Plan (SWMP) pursuant to CDPHE requirements and guidelines. The SWMP will further describe and document the ongoing activities, inspections, and maintenance of construction BMPs.

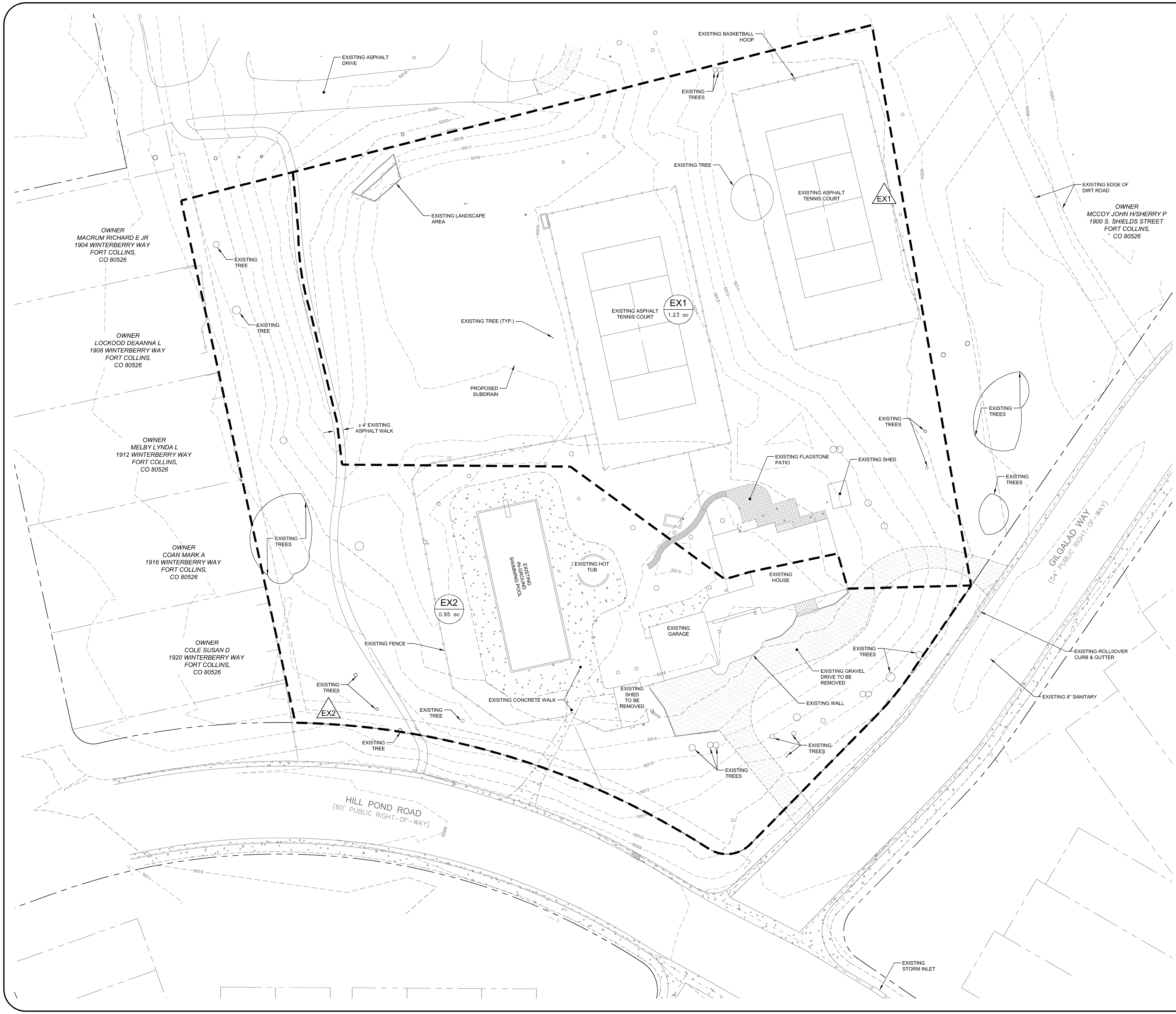
APPENDIX E

STANDARD OPERATING PROCEDURES (SOPs) REFERENCES

NORTHERN ENGINEERING

MAP POCKET

DR1 – OVERALL DRAINAGE EXHIBIT



NORTH

20 0 20 40 60 Feet

(IN FEET)
1 inch = 20 ft.

LEGEND:

EXISTING STORM SEWER
EXISTING INLET
EXISTING CONTOUR — 4953 —
EXISTING CURB & GUTTER
PROPERTY BOUNDARY
DESIGN POINT (A)
FLOW ARROW
DRAINAGE BASIN LABEL — BASIN DESIGNATION (C), BASIN AREA (AC) (0.60 ac)
DRAINAGE BASIN BOUNDARY

NOTES:

1. REFER TO THE "PRELIMINARY DRAINAGE REPORT FOR HILL POND RESIDENCES" DATED JANUARY 21, 2015" BY NORTHERN ENGINEERING, DATED JANUARY 21, 2015 FOR ADDITIONAL INFORMATION.

BENCHMARK/BASIS OF BEARING

PROJECT DATUM: NGVD 29 (OLD CITY OF FORT COLLINS DATUM)

BENCHMARK #1:
City of Fort Collins Benchmark 01-93
Elevation = 5023.27

BENCHMARK #2:
City of Fort Collins Benchmark 29-92
Elevation = 5022.50

NOTE: IF NAVD 88 DATUM IS REQUIRED FOR ANY PURPOSE, THE FOLLOWING EQUATION SHOULD BE USED:
NAVD88 = NGVD29 UNADJUSTED + 3.17'

FOR DRAINAGE REVIEW ONLY
NOT FOR CONSTRUCTION

CALL UTILITY NOTIFICATION CENTER OF COLORADO

811 Know what's below. Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED:	City Engineer	Date
CHECKED BY:	Water & Wastewater Utility	Date
CHECKED BY:	Stormwater Utility	Date
CHECKED BY:	Parks & Recreation	Date
CHECKED BY:	Traffic Engineer	Date
CHECKED BY:	Environmental Planner	Date

REVIEW SET
NOT FOR CONSTRUCTION
01/21/15

Revisions:
No. | By: | Date:

NE NORTHERN ENGINEERING
301 North Howes Street, Suite 010
Fort Collins, Colorado 80521
PHONE: 970.221.4158
www.northernengineering.com

PROJECT: 620-004
DATE: January 21, 2015
DESIGNED BY: A. Reese
SCALE: 1"=20'
DRAWN BY: B. Ruch
REVIEWED BY: N. Haws

HILL POND RESIDENCES
EXISTING DRAINAGE EXHIBIT

Sheet DR2

NORTH

20 0 20 40 60 Feet

(IN FEET)
1 inch = 20 ft.

LEGEND:

- PROPOSED STORM SEWER
- PROPOSED SUBDRAIN
- PROPOSED INLET
- PROPOSED CONTOUR
- EXISTING CONTOUR
- PROPOSED SWALE
- PROPOSED CURB & GUTTER
- PROPERTY BOUNDARY
- DESIGN POINT
- FLOW ARROW
- DRAINAGE BASIN LABEL (BASIN DESIGNATION, BASIN AREA (AC))
- DRAINAGE BASIN BOUNDARY
- PROPOSED SWALE SECTION
- PROPOSED PERMEABLE PAVERS

NOTES:

1. REFER TO THE "PRELIMINARY DRAINAGE REPORT FOR HILL POND RESIDENCES" DATED JANUARY 21, 2015 BY NORTHERN ENGINEERING, DATED JANUARY 21, 2015 FOR ADDITIONAL INFORMATION.

BENCHMARK

PROJECT DATUM: NGVD 29 (OLD CITY OF FORT COLLINS DATUM)

BENCHMARK #1:
City of Fort Collins Benchmark 01-93
Elevation = 5023.27

BENCHMARK #2:
City of Fort Collins Benchmark 29-92
Elevation = 5022.50

NOTE: IF NAVD 88 DATUM IS REQUIRED FOR ANY PURPOSE, THE FOLLOWING EQUATION SHOULD BE USED:
NAVD88 = NGVD29 UNADJUSTED + 3.17'

**FOR DRAINAGE REVIEW ONLY
NOT FOR CONSTRUCTION**

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City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED:	City Engineer	Date
CHECKED BY:	Water & Wastewater Utility	Date
CHECKED BY:	Stormwater Utility	Date
CHECKED BY:	Parks & Recreation	Date
CHECKED BY:	Traffic Engineer	Date
CHECKED BY:	Environmental Planner	Date

No.	Revisions:	By:	Date:

REVIEW SET
NOT FOR CONSTRUCTION
01/21/15

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PROJECT: 620-004	DESIGNED BY: A. Reese	DRAWN BY: B. Ruch
DATE: January 21, 2015	SCALE: 1"=20'	REVIEWED BY: N. Haws

HILL POND RESIDENCES
DRAINAGE EXHIBIT

Sheet
DR1
Of 15 Sheets

From: Terry Podmore
To: Jason Holland
Subject: Re: Hill Pond Residences -- 2nd neighborhood meeting
Date: Tuesday, November 04, 2014 9:10:40 PM

Jason,

Thank you for the notice about the public meeting for the 910 Hill Pond development.

As you may remember, I am particularly concerned about the stormwater drainage provisions for this development. There were problems identified with the original design and, if I am reading the Drainage Report correctly, different problems are present with the current plans.

It appears that the stormwater will be discharged into Gilgalad Way and run down the gutter on the north side for a considerable distance before entering the storm drain near the mailboxes. If I have interpreted the drawings correctly, this will cause a significant increase in flow and does not represent a suitable method of disposal. The stormwater needs to be directed to Spring Creek without discharge on to Gilgalad Way.

I look forward to seeing you at the meeting on the 17th,

Terry Podmore
733 Gilgalad Way

On Mon, Nov 3, 2014 at 5:13 PM, Jason Holland <JHolland@fcgov.com> wrote:

> Dear neighbors,
>
> I'm sending this to the email list we have from those who attended the first neighborhood meeting last April as well as a few folks who have contacted me since that time. There will be a second neighborhood meeting two weeks from today on Monday November 17th. Please note that this meeting will be at the Gardens on Spring Creek Facility, not at Plymouth Congregational Church.
>
> I have also attached staff's comments related to these drawings. The attached meeting letter and first round of plans reviewed by staff can be found here:
>
> http://www.fcgov.com/developmentreview/agendas.php
>
> I have also received a few questions about the development review process and the appeal process from neighbors who were not able to attend the last meeting.

For this proposal, staff provides a recommendation to a hearing officer, and the hearing officer makes the decision on whether to approve, deny, or approve the plan with conditions. Staff can also recommend conditions of approval. Once the hearing officer makes the decision, the decision can be appealed to City Council. More information on appeals can be found here:

http://www.fcgov.com/cityclerk/appeals.php

There are two links, one for "appeal guidelines" and the other for the appeal form.

After the 2nd neighborhood meeting, should the project proceed forward to a hearing, you'll have a chance to look at the plans given to the hearing officer before the hearing. Or, there could be a third neighborhood meeting. You will receive a notice for the time and place of the hearing should the project move forward to that step.

If the project does go on to a hearing, in addition to residents attending the hearing and providing comments directly to the hearing officer, it is also very helpful to send me a letter in advance of the hearing (an email letter is typical), and I will print your letter and give it to the hearing officer so that she can consider the comments when making her decision. The hearing office has ten business days following a hearing to make issue a decision. The decision letter is sent to everyone who attends the hearing and signs in. Letters written to me that are presented to the hearing officer in support of or in opposition to a development proposal become part of the "record" and if the project is appealed, the letters, transcript of the hearing and hearing documents are all provided to City Council as part of the appeal, should an appeal be filed. I would suggest seeing how they revise the current plan before sending me a formal letter for a hearing officer, since the plans may change based on staff's comments, or your comments at the second neighborhood meeting.

I hope to see you at the second neighborhood meeting on November 17th. If you can't make it, feel free to contact me for an update and to discuss the proposal.

Thanks,

Jason

Jason Holland, PLA | City Planner

City of Fort Collins

John + Sherry McCoy
1900 S. Shields Street
Fort Collins, CO 80526
(970) 226-5511

November 12, 2014

Mr. Jason Holland
Community Development and Neighborhood Services
PO Box 580
Fort Collins, CO 80522

Re: Hill Pond Residences, PDP 140015

Dear Jason:

As an adjacent neighbor to the proposed development described in the caption above, please know that we are in favor of the PDP as submitted by the developer. We believe that the type of development contemplated in the attached single family or duplex arrangement (plus two single family residences) equating to 18 homes is a benefit to Fort Collins and our neighborhood.

The subject property at 910 Hillpond comprising 2.1 acres could be developed in a number of ways. We think the proposed development will be compatible with the neighborhood. It is well conceived and has our support. It is our hope that the City Planning Staff will support this project as well.

Best Regards,

John McCoy

NEIGHBORHOOD INFORMATION MEETING

PROJECT: Hill Pond Road and Gilgalad Way Residential

PROJECT LOCATION: 910 Hill Pond Road

DATE: April 28, 2014

PLANNER: Jason Holland

NEIGHBORHOOD RESOURCES: Amanda Nagl, Neighborhood Administrator

The meeting began with Jason Holland providing an overview of the neighborhood meeting agenda and an explanation of the City development review process. Jason provided information on:

- The importance of the sign-in sheet and that those who provided email addresses would get updates on the status of the project should the project proceed forward.
- An overview of the review process step and the status of the proposed project relative to the overall review process.
- An overview of the Land Use Code standards that related to the project.
- An overview of the available City website resources for citizen's role in development review.
- An overview of the available City website resources for appeals, as well as an explanation of who could be a party-in-interest.
- An explanation of where on the City website the neighborhood meeting notes would be posted and how neighbors could sign up to get weekly updates on the status of development projects and neighborhood meetings.
- Jason also quickly showed the group a number of slide images, including aerial images of the neighborhood, a zoning map and contextual photographs of the site and surrounding area, which could be referred to later in the meeting to help with discussion if needed.
- Amanda Nagl provided the meeting ground rules for communication.

The developer / applicant presented the site plan and gave a brief presentation. Jason then opened up the meeting for questions.

Q: Question A: Answer C: Comment

Q: (Citizen) What is the minimum density that the code requires, did you say 7?
A: (City staff) Yes

Q: Will parking conform to city plan?
A: (City staff) Yes, for these single family homes 2 spaces are required for each home.

Q: (Citizen) How far are the project's entrance locations from the main intersection at Hill Pond and Gilgalad?

A: (Applicant) 146 feet, other side is more, do not know exactly.
C: (Citizen) My concern is a conflict with the school bus pick up location and how the entrances could affect safety.

Q: Property is several feet taller than surrounding neighbor properties. Concern about privacy and drainage.
A: (Applicant) Comprehensive drainage plans are required with the development plan. Water will feed into the detention pond. This site is higher. We are building 2-story. The area is zoned for 3-story. We went 2-story for conformity with the neighborhood.

Q: (Citizen) Where will it drain?
A: (City staff) Current stormwater regulations are pretty stringent to retain and treat water. Water would need to be released slower than it is now. There would be an inlet structure in the detention pond that would probably tie into the storm drainage inlet at the street. The closest storm drain is across the street to the south on the east side of Hill Pond, and the detention pond outlet would likely tie into this storm inlet.

C: (Citizen) Windtrail Townhomes has an easement, and the small print on our development agreement says it is Windtrail's responsibility. The easement ~~goes through~~ begins at the southeast corner of Sundering. The storm drain in Hill Pond Road daylights in Windtrail and drains through Windtrail to the wetlands; seems you should have to ask the Windtrail HOA if a project can drain through our HOA property.

C: (Citizen) Southwest corner of street intersection is a lower grade, it fills and freezes.

Q: (Citizen) Could a fence go on the west side?
A: (Applicant) Do not know yet but that is a good idea; there is a berm there currently.

Q: (Citizen) Is that a street on the right side of the site plan?
A: (City staff) It would be considered a private drive.

Q: What is the landscape width on the west side of the plan between the parking and the west property line?
A: (Applicant) This is a conceptual hand drawing, but it looks to be about 10 feet. Plan is to put in a berm and landscaping and to save some of the existing trees if possible.

C: (Citizen) Support for privacy; concern that decks in the backyards of existing homes to the west will be visible from the new homes.

Q: (Citizen) This development adds a number of trips to the intersection at Hill Pond and Shields, will there be a traffic signal installed at this intersection?
A: (City staff) Depends on the number of additional trips generated by the development. If the additional traffic causes the intersection to fail, then that could trigger improvements.
Q: How do you determine intersection failure?
A: (City staff) The intersection must meet a minimum level of service and traffic operations staff will be reviewing that. If a project pushes traffic over the acceptable level, solutions are found.

C: (Citizen) Drainage and storm water issues—I do not understand how 14 homes fit in this space.

Q: (Citizen) Where exactly is the western property line? Can we go back and look at some of the photographs the city brought?
A: (City staff and applicant) The western property line is the exterior perimeter of fence, to left of pine tree in the photograph presented.

C: (Citizen) Drainage easement starts at back of Sundering Townhomes. People at the city have said it is not Windtrail's responsibility but they will not put it in writing.

Q: (Citizen) Is water treated (proposed water detention system)?
A: (City staff) Yes, sediment is captured.

Q: (Citizen) An issue of fairness is what we have; the storm water issue should be reviewed as a part of this project. Will it be reviewed?
A: (City staff) (Contacts at City Stormwater Department provided). Glenn Schlueter and Jon Haukaas are reviewing this issue. Jason is reviewing history. Jon is going to City Attorney's office for further review. Status is that they are still looking at it, stormwater department is reviewing maintenance options for all properties that use the channel, another option is that the city take over maintenance, another option is to work with CSURF, who owns the property.

Q: (Citizen) Has conceptual review been completed? In November? That plan was different; the street was in the middle. I am wondering if the review had been done on this design, would there be different issues—compatibility, etc.
A: (Applicant) They will get comments from staff on this current design. This may or may not be the final direction. This new plan was in part a response to the November conceptual review.

C: (Citizen) Drainage from asphalt to small yards to the west, concern is to the foundation.
A: (City staff) Water from the drives will be diverted to the detention pond.

Q: (Citizen) Will there be a fence? Headlight concern.
A: (Applicant) Do not know yet.

Q: (Citizen) On the west border, isn't there an existing easement?
A: (City staff) Yes, it's a 6 foot utility easement.

Q: (Citizen) What is the timeframe for length of construction?
A: (Applicant) Hard to know, 1 year approximately to entitle, could go in a year, could take longer. The City has requirements for construction noise, hours of operation and erosion, control during construction.

Q: (Citizen) Build in phases or all at once?
A: (Applicant) Concept is at once, infrastructure first, can't say how fast they will sell though.

Q: (Citizen) So houses will really sell for two times as much as area townhomes?
A: (Applicant) I believe it can be done or I wouldn't be here. I respect your opinion but disagree. We have evaluated it.

Q: (Citizen) Density, is a variance required?

A: (City staff) Variance is really for engineering standards, such as to the width of an entrance drive. For changes to the Land Use Code, we call this a modification. We have the modification process because there are so many standards and many aspects of the code are very prescriptive. Sometimes a project needs a modification to fit into the area better.
Q: (Citizen) What do you mean by prescriptive?
A: (City staff) Prescriptive code language is something very defined, like a parking space must be 9 feet wide. Other parts of the code are more generally defined. This proposal does not meet minimum density requirements, and the developer would need to justify modifying the requirement. This might be a case where the modification would make the site fit better into the surrounding neighborhood. The decision maker for the modification in this case will be a hearing officer, based on staff recommendations.

Q: (Citizen) Are there building elevations that we can look at?
A: Yes. (building elevation slide is presented.)

C: (Citizen) Like it is less dense than requirements.

C: (Citizen) Like that it is not 3-story.

Q: (Citizen) Is the outer drive a street or alley?
A: (Applicant) A private drive, functions like an alley, it is about 24 feet wide with 2 lanes.
A: (City) A typical local street would have two 11 foot wide travel lanes and parallel parking on both sides.

C: (Citizen) People who back to this might prefer back yards backing to the existing homes to the west instead of the drive loop and outer parking.

C: (Citizen) How can street be this close to driveway? Also, it is better to have front entry than garage entry.
A: There are requirements for intersection spacing and staff will be reviewing that aspect.

Q: (Citizen) All 2 car garages?
A: (Applicant) Yes.

Q: Shingle Roofs?
A: (Applicant) Yes.

Q: (Citizen) Brick and wood siding mix?
A: (Applicant) Yes. Trying for more craftsman than urban for compatibility.

Q: (Citizen) Square footage?
A: (Applicant) 1700-2000 square feet.

Q: (Citizen) Does this plan meet fire code?
A: (Applicant) Yes, that is part of the loop drive concept, for fire access.

Q: (Citizen) Do you have a slide with you showing the conceptual review plan from November?
A: (City) No. This plan is a response to comments from the concept review.

C: (Citizen) First plan would put back yard to back yard? I support that design.

Q: (Citizen) How would trash be picked up?
A: (Applicant) Not sure yet if this would be individual or centralized.

Q: (Citizen) Basements?
A: (Applicant) Probably a mix, depending on ground water.

Q: (Citizen) 2 car garages, so are the alleyways for guests?
A: (Applicant) Don't know really. Depends on the parking needs of each house.

Q: (Citizen) So, 90% of the time, no headlights?
A: (City) Headlights would need to be screened.

C: (Citizen) Ask that covenants say no boat or RV storage.

C: (Applicant) Maybe an option for the plan is a one way loop is possible vs. 2-way. It might allow for more room on west side.

C: (Citizen) I live to the east, let's be aware that people do live to the east that could be affected by headlights.

Q: (Citizen) Certified materials (LEED)?
A: (Applicant) Yes, there could be, design is long way from there.

Q: (Citizen) Have you looked at John McCoy's original plan?
A: (Applicant) No. Always open to looking at things.
A: (City) No formal plan has ever submitted to the City for this property.

Q: (Citizen) Can there be parallel parking along the north?
A: (Applicant) Try to distribute parking throughout the project, geometry really, will keep it in mind, maybe it could be parallel.

Q: (Citizen) What is the space in the middle?
A: (Applicant) Green space, community common area, sidewalk access to the front entrances.

Q: (Citizen) City planning looking long range? Overall there is a saturation of housing. What if the economy takes a downturn? Lot of development going on now, is it over-saturation?
A: (City) The West Central Area Plan study is underway, but no moratorium on building permits has been discussed.

C: (Citizen) Foundation slab along Prospect = eye sore, example.

Q: (Citizen) Grade is higher than surroundings. Light is a concern, pay strong attention to shielding and glare.
A: (City staff) The city code has restrictions on light spillover. The city requires fully shielded light sources.

C: (Citizen) Be aware that since the property sits up high, it may be harder to shield the light source.
A: (Applicant) Vertical fixtures vs. hats may be a solution for lights.

Q: (Citizen) Was this land the Hill Pond recreation area? The green area between the existing fence and out backyards has been enjoyed by citizens for years. Isn't there some way that if residents use an easement for a number of years they have rights to it?
A: (Project's Current Owner) Owner has previously posted no trespassing, has watered it, it was not free for use.
A: (City staff) I think what you're describing is a prescriptive easement; you may want to talk with an attorney about that question.

Q: (Citizen) What will the detention pond look like?
A: (City staff) Stormwater department has revamped planting and grading requirements for ponds and the pond will need to be landscaped. You also can't put a wall all the way around the pond, it needs to look more natural.
C: (Citizen) It is tough to maintain, the water table is too high, it will grow rushes.
A: (Applicant) The pond will have to be a feature. The developer typically builds apartments and wants compatibility here.

Q: (Citizen) 7 units per acre is for single family?
A: (Applicant) No, 7 is minimum density required and this is less, we could do multi-family units here.

C: (Citizen) Appreciate it is not another Grove.

C: (Citizen) If I had choice between apartments and houses, I like houses.

C: (Citizen) Just wish our patios did not look at parking/drive.

Q: (Citizen) Timeline?
A: (Applicant) More drawings in 3+ months.

Q: (Citizen) Meet again?
A: (City staff) Not able to require a neighborhood meeting. Developer is having this meeting voluntarily. More than 75 bedrooms or more than 50 units would require a meeting. The development group could meet again with the neighborhood but the city can't require it.
Q: (Citizen) Is it possible to email people who signed in tonight when development review notes are online?
A: (City staff) Yes, and the developer has made his address available and Jason will send updates to the email list.

Q: (Citizen) Planning and Zoning vs. Administrative?
A: (City staff) The hearing decision would be by a hearing officer and not the Planning and Zoning Board. Land Use Code specifies this by the type of use and the number of units on a project or the number of bedrooms.
A: (applicant) This project has 42 bedrooms, apartments this developer is starting on Shields has 90+.

C: (Citizen) Much rather have $500,000 neighbor than what could be there.

C: (Citizen) Stagger houses to decrease alley feel and allow more landscape.
A: (City staff) Very good suggestion.

Q: (Citizen) You should also consider places to pile snow in winter
A: (Applicant) Yes, good point.

With no more questions, Jason Holland closed the meeting.

NEIGHBORHOOD INFORMATION MEETING

PROJECT: Hill Pond Road and Gilgalad Way Residential

PROJECT LOCATION: 910 Hill Pond Road

MEETING DATE: November 17, 2014

PLANNER: Jason Holland

NEIGHBORHOOD RESOURCES: Amanda Nagl, Neighborhood Administrator

The meeting began with Jason Holland providing an overview of the neighborhood meeting agenda and an explanation of the where the proposal is in the City development review process. Jason provided information on:

- An overview of the available City website resources for citizen's role in development review.
- An overview of the available City website resources for appeals.
- An explanation of where on the City website the neighborhood meeting notes would be posted and how neighbors could sign up to get weekly updates on the status of development projects and neighborhood meetings.
- Amanda Nagl provided the meeting ground rules for communication.

The developer / applicant presented the current site plan and gave a brief presentation. Jason then opened up the meeting for questions.

Q: Question A: Answer C: Comment

Q: (Citizen) Do all of the units have patios in back?
A: (Applicant) All have some – some on the side and some are located in the back.

Q: (Citizen) Do all of the units have parking?
A: (Applicant) Yes, for these homes 2 spaces are required for each home.

Q: (Citizen) Price range?
A: (Applicant) $400,000 or more per unit; 1800 to 2000 square feet per unit; high end finishes; main floor master bedroom with 2nd story bonus room; would expect purchasers to likely be empty nesters.

Q: (Citizen) Will there be a fence around the project?
A: (Applicant) Don't know yet for sure, there is a screen fence around each patio.

Q: (Citizen) The driveways into each unit are only 5 feet deep. I'm concerned that residents will park along the main drive isle and this will block fire truck access.

A: (Applicant) Cars must park in the garages or in the guest parking spaces; this will be part of the HOA covenants. If they block the drive isles they will be towed. We're also adding to the covenants that the garages can't be used for storage such as boats.

Q: (Citizen) Will the units be individually owned?
A: (Applicant) Yes.

Q: (Citizen) One story?
A: (Applicant) No, all units have a partial two-story.

Q: (Citizen) Are all of the units/floor plans the same?
A: (Applicant) There are three floor plans and three different exteriors.

Q: (Citizen) No rentals?
A: (Applicant) There could be rentals but not likely at this price.

Q: (Citizen) Will the development impact access to Spring Creek Trail?
A: (Applicant) No.

Q: (Citizen) With the storm drainage report proposed for this project, the water flow exits at Gilgalad Way into the street gutter and then crosses the street. This is not a good solution to have the water draining out into the street.
A: (Applicant's engineer) Gilgalad is considered an acceptable outflow given the low volume of water.

Q: (Citizen) Where does the water go after that, into the Windtrail Townhomes wetlands?
A: (Applicant's engineer) Gilgalad is considered an acceptable outflow given the low volume of water.
A: (Basil Hamdan – City staff) Basil shows the neighbors an outfall map of the area and explains where the water goes. Basil explains that detention and water quality treatment is required, and in this case it is a system of interlocking pavers with a gravel basin under the pavers for detention volume and filtration. The gravel basin will hold the increase in runoff beyond the amount that is released now in a "2 year" storm event. They are required to release water at a rate that is at, or less than, the current "historic" flow at the site.

Q: (Citizen) Is the bottom of the detention sealed?
A: (Applicant's engineer) No, the detention is designed to mimic natural systems.

Q: (Citizen) Why not take the water straight to Spring Creek instead of it flowing into the street?
A: (Applicant's engineer) We don't have access directly to the creek. We are required to drain into an existing system which in this case is the catch basin in the street.

Q: (Citizen) Basements proposed?
A: (Applicant) No, we know there are challenges with basements; crawl spaces are more likely because of soils.

Q: (Citizen) Parking provided?
A: (Applicant) 2-car garage per unit plus 10 guest spaces.

Q: (Citizen) I'm concerned about on-street parking at the intersection, can you restrict parking for a certain distance at the intersection? School busses also use that corner.

A: (Martina Wilkinson -- City staff) We try to reduce the amount of red curb that the city paints along streets, but if problems arise after the development is in place, we could consider restricting parking at the intersection.

Q: (Citizen) There is speeding on Hill Pond and where people turn onto Gilgalad they cut the corner driving fast through the turn. People turning out at this development will need to look right and be careful coming out of this development. You should consider the amount of landscaping at that corner.
A: (Martina Wilkinson -- City staff) We asked that the development maximize the separation space of the main entrance from the Gilgalad/Hill Pond intersection.
A: (Jason Holland -- City staff) We also require that landscaping is lower at intersections so that site lines are clear.

Q: (Citizen) Is exterior maintenance included?
A: (Applicant) The HOA will cover all exterior – paint, snow removal, common elements.

Q: (Citizen) HOA cost?
A: (Applicant) Don't know yet, maybe $200 to $300 per month.

Q: (Citizen) Access Gilgalad vs. Hill Pond?
A: (Applicant) Typically staff prefers that access be taken from the street that has less traffic volume, which is Gilgalad.

Q: (Citizen) How many existing trees are being saved?
A: (Applicant) Hard for us to say exactly but it looks to be about a 1/3 are being saved (refers to tree mitigation plan).
A: (City staff – Jason Holland) There is still more work that needs to be done to the plans, and they will need to do more coordination work with myself and the City Forester.

Q: (Citizen) Isn't there an existing house, is that being removed?
A: (Applicant) Yes, and also the swimming pool and tennis courts are being removed.

Q: (Citizen) There are some trees near the west side of the property that have large dead branches that are threatening to fall into the neighbor's property to the west. Are those being removed?
A: (Applicant) Our landscape architect did meet with the City Forester on the site, and trees that are in bad shape are being removed.
A: (City staff – Jason Holland) We can take a look at those trees with the City Forester and see what needs to be done if they're not on the removal list.

Q: (Citizen) We've seen deer on the site, have wildlife affects been looked at?
A: (Applicant) We were required to submit an ecological review and the report said the site was not a habitat.
(City staff – Jason Holland) What the assessment noted was that there were bird species that used the cottonwood trees for nesting, and that any tree removal needed to work around times that bird nesting might be occurring.

Q: (Citizen) Isn't the Hill Pond area lower than this property, how is that being addressed?
A: (Applicant) West side will match grade at the edge of the property and the west side of the berm with the trees will stay.

Q: (Citizen) What is the width of the internal drives provided?
A: (Applicant) 24 feet wide, private driveway with pavers, pavers will be color coded with a pedestrian border.

Q: (Citizen) Guest parking is limited and there's no room behind the garages for people to park. I'm concerned that the number of guest spaces isn't enough. People will just be parking in the drive isle.
A: (Applicant) They can't park in the drives, they will be towed. We are providing guest parking spaces.
A: (City staff – Jason Holland) There is also on street parking available on Hill Pond and on Gilgalad, just like any other typical residential street, so people may park there also.

Q: (Citizen) What's the timeframe for the project?
A: (Applicant) Good question. It's been at least a year that we've been working on this. The first plan we proposed was rejected by the city. Then we showed another plan at the last neighborhood meeting that had alleys and parking along the edge and no one liked that. To get this new plan approved without the alleys, we need a modification to the code for the plan. If you oppose this, you are saying that you like the other one better, and city staff will go back to that plan.
A: (City staff – Jason Holland) I'm not sure that we will reach that conclusion.

Q: (Citizen) What lighting is proposed?
A: (Applicant) We're trying to stay away from pole lights and have the lighting fixtures on the homes. We will need something in the central area and it will be down lit.
A: (City staff – Jason Holland) They will have to meet the lighting code and this requires that all of light sources be fully shielded so you can't see the light bulbs, just the wash of light on the ground.

Q: (Citizen) Chimneys are shown?
A: (Applicant) Yes, these will be gas fireplaces and we added the chimneys because we like the look.

Q: (Citizen) Can you show us what the backs of the buildings will look like where they face my house along the west?
A: (Applicant) Yes, from the Hill Pond view (shows the slide rendering). This is also what the backs of the buildings will look like along the west. We wanted a mix of materials and details.

Q: (Citizen) Are there fences proposed?
A: (Applicant) Yes, around the rear and front patios.

Q: (Citizen) (referring to the elevations). Is this the south boundary elevations? The back side for the neighbors? The big blank wall on the duplex grabs my eye, provides no sense of people activity, presence. Are those back doors? Doesn't the code require that buildings along a street have porches, more street friendliness?

A: (Applicant) We can work on the street view. A normal front would be a lot of garages.
Q: (Citizen) Maybe something in between?
A: (Applicant) We did not put all of the landscaping in the model because then you would not see the houses in the view from the street. We tried to minimize how we project to neighbors.

A: (City staff – Jason Holland) That's something that the plan doesn't have along Hill Pond and Gilgalad, and the City Plan promotes front porches and entries facing the streets. Their attempt here is to emphasize fit in with the neighborhood development pattern.

Q: (Citizen) It helps the elevation view because two of the homes are single family homes. What do you think the impact will be on area home values?
A: (Applicant) Not sure. Preferable to apartments, surely.

Q: (Citizen) Like this proposal a lot better. Traffic impact on Shields?
A: (City staff – Martina Wilkinson) When we look at this area, they are adding just under ten percent to the homes that collect at the Hill Pond intersection, and that doesn't require any changes. We're not looking to signalize Hill Pond. We recognize that making a left is difficult and that it may be better to go to the Rolland Moore signal.

With no more questions, Jason Holland closed the meeting at 7:30 p.m.

HILL POND ECOLOGICAL CHARACTERIZATION STUDY©

October 2014
Larimer County, Colorado

Prepared by:

BLUE MOUNTAIN Environmental Consulting LLC

BLUE MOUNTAIN ENVIRONMENTAL CONSULTING

Supporting Sustainable Management of Natural Resources

937 MALLARD DRIVE, FT. COLLINS, CO 80521 (970) 224-0851

TABLE OF CONTENTS

1.0 Introduction

This report documents ecological characteristics within the proposed 910 Hill Pond Residences. This project design consists of 18 total units comprised of six (6) duplexes and two (2) three-plexes. All units are two-story and three-bedroom with a mix of three different unit types. The duplexes would be considered single-family residences whereas the three-plexes would be considered multi-family residences.

This report conforms to Section 3.4.1 (D) (1) of the Land Use Code of the City of Fort Collins regarding the preparation of an Ecological Characterization Study (ECS). This report was required by the City of Fort Collins Community Development and Neighborhood Services in correspondence dated November 29, 2013, because the project is within 500 feet of Spring Creek, which supports aquatic and riparian forest features.

2.0 Site Description

The proposed Hill Pond Road and Gilgalad Way Duplex/Multifamily development encompasses 2.18 acres and is located approximately 875 feet east of South Shields Street, on the north side of Hill Pond Road. The Property is bounded by residential development on all sides. The legal description for the site is a portion of the northwest ¼ of Section 23, Township 7 north, Range 69 west of the 6th Principal Meridian in Larimer County, Colorado. (A complete legal description is provided in Appendix C.)

The site was visited by Matt Tobler (Natural Resource Specialist) and Clint Hinebaugh (Wildlife Biologist) with Blue Mountain Environmental Consulting on September 30, 2014. Ecological communities are classified as 'residential' according to the Colorado Vegetation Classification Project (http://ndis.nrel.colostate.edu/coveg/) and consist of homes, lawns, and planted trees. A brief discussion of species composition is provided below in Sections 3.4 and 3.5.

3.0 Ecological Characterization

The elements of the Ecological Characterization Study are summarized in this section in the order listed in Section 3.4.1 (D) (1) of the Land Use Code. Site photos are provided in Appendix B.

3.1 Wildlife

Due to the Property's location, size, and adjacent land uses, on-site wildlife value is generally low. The Property contains a mature cottonwood gallery and provides tremendous vertical structure benefitting avifauna. Seasonal and/or year-round use can be expected by a number of passerines including American robin (*Turdus migratorius*), common flicker (*Colaptes auratus*), mourning doves *(Zenaidura macroura)*, sparrows, magpies *(Pica pica)*, swifts and swallows, crows *(Corvus brachyrhynchos)*, and ravens *(Corvus corax)*. Some suitable nesting sites for hawks and owls were identified in the larger cottonwoods adjacent to the project site, but no nests, old or new, were located on the Property during the site visit. There are several snags on the southern Property boundary that could benefit numerous species such as cavity nesting birds like chickadees and house wrens.

Figure 1. A Flicker utilizes an old cottonwood tree on the Property.

In addition to avifauna, small rodents including mice, voles, rats, pocket gophers *(Geomys bursarius)* and cottontail rabbits *(Sylvilagus auduboni)* are expected to utilize the Property year round. Given the location adjacent to Spring Creek, species such as white-tailed deer (*Odocoileus virginianus*), coyote (*canis latrans*), striped skunk (*Mephitis mephitis*), and red fox *(Vulpes fulva)* are common.

Species or evidence of species recorded during the site visit include the common flicker, sparrows, mourning and Eurasian doves, rabbits, and coyote and deer. With the exception of the Spring Creek corridor to the north, areas outside of the Property were not inventoried due to private property access concerns.

3.2 Wetlands

There are no wetlands on the Property. Spring Creek is located approximately 500 feet to the north and a 0.46-acre pond is located 260 feet to the northwest; both features are separated from the Property by other residential structures. According to the USFWS National Wetlands Inventory, Spring Creek is a riverine forested wetland while the pond is a palustrine unconsolidated bottom semi permanently flooded wetland. A map of these wetlands in relation to 910 Hill Pond Road is provided in Appendix A. Spring Creek is a 12.7-mile tributary of the Cache la Poudre River and is located just to the north of the project area. The bank along Spring Creek controls most flows; the bank height is approximately five feet above the level of Spring Creek. Although the Property is not located in a flood zone, a moderate zone is located to the

west along Waters Edge and Winterberry Way, and a high flood zone exists within the Spring Creek corridor. In the current development plan, the creek bank is not affected and no adverse effects from development are expected.

Spring Creek appears to be slightly uphill from the site. Catamount Properties is working in conjunction with the City of Fort Collins storm-water staff, an alternative approach to the detention strategy has been developed that will maintain runoff in a 2-year event and will reduce runoff significantly in a 100-year event. From http://www.fcgov.com/utilities/what-we-do/stormwater/flooding/floodplain-maps-documents, accessed on October 3, 2014.

3.3 Prominent Views

Prominent views of Horsetooth Mountain or other features along the Front Range are obscured by mature trees. Likewise, Spring Creek was not visible from or near the Property due to mature trees and other residential structures. Neighborhood views or Front Range features are not likely to be impacted by the proposed development. Typical views from points accessible to the general public are provided in Appendix B.

3.4 Native Trees and Vegetation

All trees were inventoried by Tim Buchannan, City of Fort Collins Forester, and Sandi Gibson (Landscape Architect, Outside L.A., LLC) on August 19, 2014. According to the City of Fort Collins Land Use Code, trees with a diameter at breast height (DBH) of six inches or more are defined as significant (with the exception of nuisance species). The Tree Mitigation Plan submitted to the City (separately) identified 72 trees with a total mitigation score of 72 for trees to be removed; further details are provided on the Tree Mitigation Plan. The Plan outlines how significant trees will be mitigated per City Land Use guidelines.

Common native trees and sub trees include quaking aspen (*Populus tremuloides*), green ash (*Fraxinus pennsylvanica*), lanceleaf cottonwood (*Populus acuminate*), American plum (*Prunus americana*), black locust (*Robinia pseudoacacia*), blue spruce (*Picea pungens*), Rocky Mountain juniper (*Juniperus scopulorum*), maple (*Acer spp.*), paper birch (*Betula papyrifera*), and ponderosa pine (*Pinus ponderosa*). Native vegetation in the shrub layer includes common juniper, (*Juniperus communis*), choke cherry (*Prunus virginiana*), Rocky Mountain maple (*Acer glabrum*) and sumac (*Rhus spp.*)

3.5 Non-native Trees and Vegetation

Non-native trees include Austrian pine (*Pinus nigra*), Russian olive (*Elaeagnus angustifolia*), and Siberian elm (*Ulmus pumila*), which make up a prominent portion of the total cover on the Property. Nuisance species such as Siberian elm and Russian olive were not considered significant. The shrub layer includes lilac (*Syringa spp.*). The herbaceous layer supports a

variety of non-native vegetation including smooth brome (*Bromus inermis*), kochia (*Bassia prostrate*), dandelion (*Taraxacum officinale*), Canada thistle (*Cirsium arvense*), Russian thistle (*Salsola spp*.), morning glory (*Convolvulus arvensis*), prickly lettuce (*Lactuca serriola*), knotweed (*Polygonum spp*.) and Kentucky bluegrass (*Poa pratensis*).

3.6 Bank, Shoreline and High Water Mark of Perennial Water

There are no wetlands or perennial water bodies on this site.

3.7 Sensitive and Specially Valued Species

There are no known occurrences or habitat for sensitive and specially valued species on the Property. The USFWS Information, Planning, and Conservation System (IPAC) was accessed to determine species of concern in Larimer County which included the Preble's meadow jumping mouse (*Zapus hudsonius preblei*), Ute lady's tresses orchid (*Spiranthes diluvialis*), and Colorado butterfly plant (*Gaura neomexicana* ssp. *coloradensis*), all of which are associated with riparian/wetland areas.

According to the U.S. Fish and Wildlife Service (Hansen 2014 pers. comm.), all trapping for the Preble's meadow jumping mouse in Fort Collins has been negative. Typical habitat for Preble's is comprised of well-developed riparian vegetation with adjacent, relatively undisturbed grassland communities and a nearby water source. These riparian areas should include a relatively dense combination of grasses, forbs, and shrubs. Based on these habitat requirements and the negative trapping data, it is BMEC's opinion that Preble's does not occur on the site and development of this project will not affect Preble's adversely.

Similarly, it is our opinion that the Ute lady's tresses and Colorado butterfly plant do not occur on the site. The closest known occurrences of these plants are near the northwest boundary of Fort Collins (Ute lady's tresses) and within the City-managed Soapstone Prairie Natural Area near the Wyoming border (butterfly plant). Suitable habitat is not present within the project area or within the adjacent Spring Creek buffer zone.

3.8 Special Habitat Features

Due to residential use, special habitat features are minimal. Article 3, Section 3.4.1, of the City of Fort Collins Land Use Code applies to Natural Habitats and Features and has identified a buffer of 100 feet from Spring Creek and 50 feet from the naturalized pond to the northwest, both of which are outside of the proposed project area. According to the Natural Habitat and Features Map provided the City of Fort Collins (Appendix A), prominent features in the vicinity of the Property include non-native grasslands, non-native upland plains forest and aquatic areas.

3.9 Wildlife Migration Corridors

According to the City of Fort Collins Wildlife Management Guidelines "the Fort Collins area continues to be an important migratory corridor for raptors, songbirds, and butterflies. As wetlands have increased along the Front Range, so has the value of Fort Collins for migratory waterfowl, shorebirds, and other wetland bird species. Riparian forests along the Poudre River and other stream corridors in Colorado are recognized by many as one of the more diverse ecosystems in the United States."

Spring Creek is located approximately 500 feet from the northern boundary of the Property and serves as a wildlife migration corridor. In addition to avifauna, it is expected that raccoons, skunks, and other urban-adapted species use this tributary to move through the region. The current development plans do not call for development along Spring Creek, therefore, the proposed development should not affect the functioning of Spring Creek as a migration corridor.

3.10 General Ecological Functions

The 2.18-acre site supports upland ecological functions within the context of residential developments as discussed herein. Currently the site consists of upland vegetation with some disturbed/early-seral sites. Upon completion, the proposed development will maintain 35% (33,032 sq. ft.) of the total lot coverage (94,912 sq. ft.) in open space/landscape. Landscaping will be completed in accordance to current City Land Use Codes (3.2.1 Landscaping and Tree Protection).

3.11 Timing of Development in Relation to Ecological Character

The primary concern for the timing of development is protection of nesting birds. Under the Migratory Bird Treaty Act of 1918, it is unlawful for anyone to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs. If tree removal or construction commences during the bird breeding season, a survey for active nests should occur and nests should be avoided until activity ends. In addition, Colorado Parks and Wildlife (CPW) provides recommended guidelines for seasonal buffers for nesting raptors (http://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/RaptorBufferGuidelines2008.pdf). Although no raptor nests were discovered on site, foliage on deciduous trees was still present and developers should be aware that no tree with an active red-tailed or Swainson's hawk nest shall be removed unless a permit for such removal has been obtained by the developer from the United States Fish and Wildlife Service (USFWS). The breeding season for most migratory birds is between March and August.

3.12 Mitigate Measures

There are no known impacts to natural habitats or features on the site. The proposed development will occur on previously disturbed areas primarily consisting of a house, swimming pool, and two tennis courts. According to John Dengler, the architect, many of the larger existing trees have been designated to be saved. The majority of these trees are near the entry to the project from Gilgalad Way, along Hill Pond Road, and on the west side where the Property adjoins the single-family residences. Any removal of trees on the Property needs to be timed to avoid disturbing nesting species. While mature cottonwood trees do contain nesting cavities, these same trees represent a hazard to people and will need to be removed on this basis. Replacement of high-value trees has been outlined on the Tree Mitigation Plan dated September 17, 2014 (submitted to the City separately). The proposed construction period is not yet known. If construction or tree removal is proposed to begin during the potential bird nesting periods, a nest search is recommended within two weeks prior to the start of construction or tree removal to avoid Migratory Bird Treaty Act infractions.

4.0 Conclusions and Recommendations

The team at Blue Mountain Environmental Consulting believes that no significant ecological resources will be adversely impacted on this site. The primary concern on-site is the timing of the construction and removal of trees to avoid disturbing nesting birds. The proposed development meets the standards that preserve or enhance the ecological character, function, and wildlife use of the natural habitat or feature, which in this case is the Spring Creek corridor and associated riparian areas.

References

City of Fort Collins Floodplain Maps and Documents. http://www.fcgov.com/utilities/what-we-do/stormwater/flooding/floodplain-maps-documents

Colorado Parks and Wildlife Recommended Buffer Zones and Seasonal Restrictions for Raptors. http://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/RaptorBufferGuidelines2008.pdf

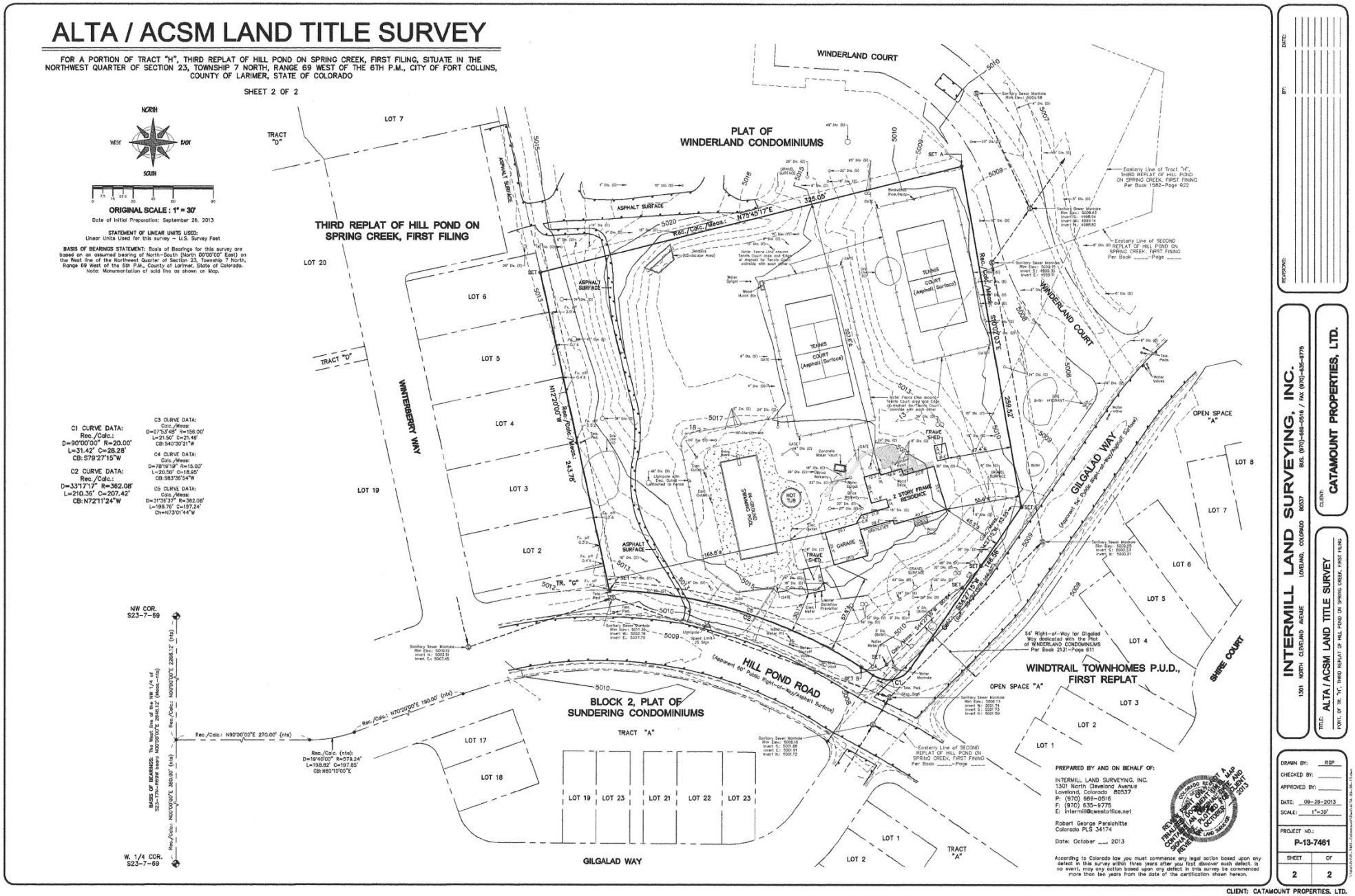
Hansen, C. 2014. Email communication from Craig Hansen, U.S. Fish and Wildlife Service, Lakewood, Colorado to Clinton Hinebaugh, BMEC, LLC. October 4.

National Wetland Inventory Mapper. Accessed on October 6, 2014. http://www.fws.gov/wetlands/Data/Mapper.html

United States Fish and Wildlife Service Information Planning and Conservation System. Accessed on October 3, 2014. http://ecos.fws.gov/ipac/

Wildlife Management Guidelines, City of Fort Collins. http://www.fcgov.com/naturalareas/pdf/wildlife-management-guidelines.pdf

Appendix A: Project Maps

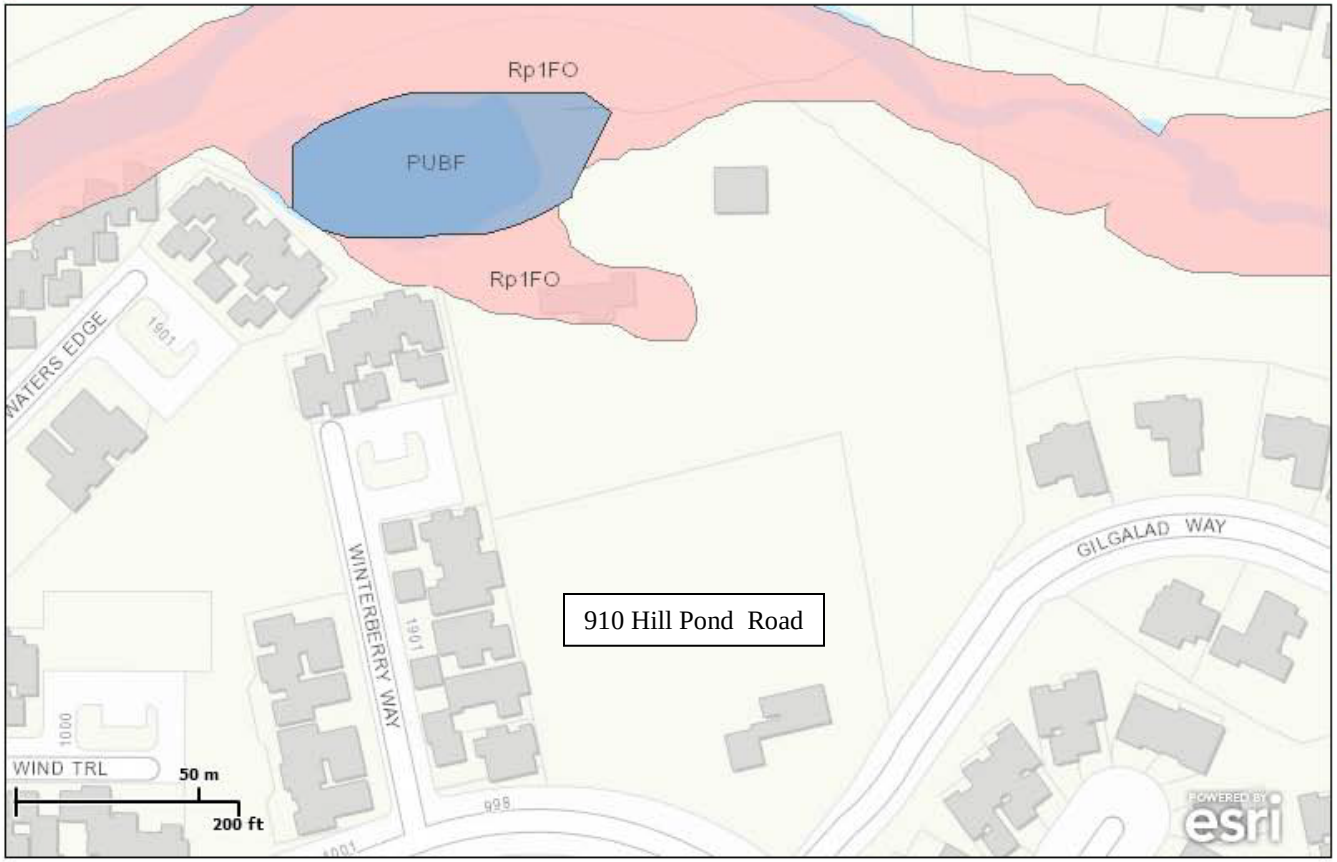


U.S. Fish and Wildlife Service

National Wetlands Inventory

910 Hill Pond,
Larimer County

Oct 6, 2014



This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

Riparian

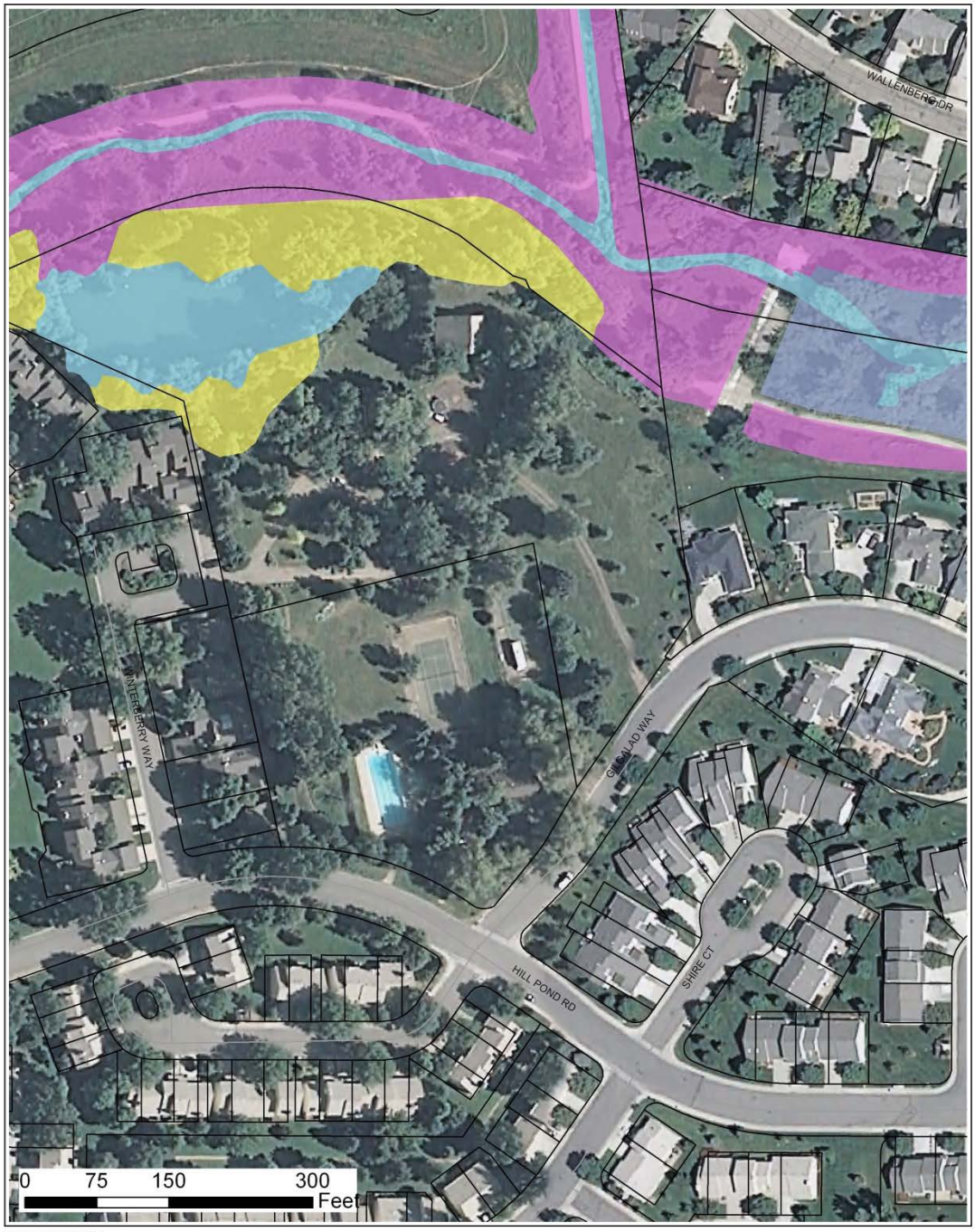
- Herbaceous
- Forested/Shrub

Riparian Status

- Digital Data

User Remarks:

910 Hill Pond Road



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Legend

- GMA
- Streets
- PRCL_OWNER

Natural Habitat and Features Description

- Aquatic
- Emergent Wetland
- Lost to Development
- Native Grassland
- Native Upland Foothills Forest
- Native Upland Foothills Shrubland
- Native Upland Plains Forest
- Native Upland Plains Shrubland
- Non-native Grassland
- Non-native Upland Plains Forest
- Riparian Forest
- Wet Meadow

Appendix B: Site Photographs

Location: **Corner of Hill Pond Road and Gilgalad Way** Photo Direction: **NE**	
Looking northeast into the Property from the corner; note cottonwoods.	

Location: **Corner of Hill Pond Road and Gilgalad Way** Photo Direction **NW**	
Looking northwest from the Property corner.	

Location: **Corner of Hill Pond Road and Gilgalad Way** Photo Direction: **North**	
Looking north from Property corner towards the residence, note mature trees.	

Location: **NE Corner** Photo Direction: **South**	
Looking south along the eastern property border near the tennis court.	

Location: **NE Corner** Photo Direction: **SW**	
Looking southwest from the northeast property corner.	

Location: **NE Corner** Photo Direction: **West**	
Looking west along the northern property border.	

Location: **NW Corner** Photo Direction: **East**	
Looking east along the northern property border.	

Location: **NW Corner** Photo Direction: **SE**	
Looking southeast across an open lawn from the northwest corner.	

Location: **NW Corner** Photo Direction: **South**	
Looking south from the northwest corner.	

Location: **SW Corner** Photo Direction: **North**	
Looking north from the southwest corner, note the pool at right.	

Location: **SW Corner** Photo Direction: **NE**	
Looking northeast from the southwest property corner.	

Location: **SW Corner** Photo Direction: **East**	
Looking east from the southwest property corner.	

Location: **Gilgalad Way** Photo Direction: **NW**	
Looking northwest from Gilgalad Way.	

Location: **Hill Pond Road** Photo Direction: **North**	
Looking north into the property from Hill Pond Road.	