PLISKO LN MULTI FAMILY

COVER SHEET

SITE DATA

LOCATION: 1600 PLISKO LN, PORT ORCHARD, WA.

TAX PARCEL NO.: 252401-3-042-2002

EXISTING ZONING: COMMERCIAL MIXED USE

COMP. PLAN DES.: COMMERCIAL

INTENDED USE: MULTI FAMILY RESIDENTIAL

SITE AREAS:	AREA (ACRES)	% OF TOTAL
DEVELOPED AREA	1.97	100.0
PERVIOUS SURFACES	1.61	81.7
IMPERVIOUS SURFACES	0.36	18.3
UNDEVELOPED AREA	0.00	0.0
TOTAL	1.97	100.0

OWNER OF RECORD: DISNEY & ASSOCIATES
5706 BETHEL RD STE 100
PORT ORCHARD, WA 98367

LEGAL DESCRIPTION: THAT PORTION OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER, SECTION 25, TOWNSHIP 24 NORTH, RANGE 1 EAST, IN KITSAP COUNTY, DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHEAST CORNER OF THE WEST HALF OF SAID SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER; THENCE NORTH 360 FEET; THENCE WEST 305 FEET THENCE SOUTH 360 FEET; THENCE EAST 305 FEET TO THE POINT OF BEGINNING; EXCEPT STATE HIGHWAY NO. 160 (FORMERLY STATE HIGHWAY NO. 14); AND EXCEPT PLISKO LANE; TOGETHER WITH THAT PORTION OF VACATED COUNTY ROAD WHICH ATTACHES BY OPERATION OF LAW. EXCEPT THAT PORTION CONVEYED UNDER AUDITOR'S FILE NO. 9402180200, DESCRIBED AS FOLLOWS: THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER, SECTION 25, TOWNSHIP 24 NORTH, RANGE 1 EAST, W.M., IN KITSAP COUNTY, WASHINGTON, LYING SOUTHERLY AND WESTERLY OF PLISKO LANE; EASTERLY OF MITCHELL AVENUE AND NORTHERLY OF STATE HIGHWAY 160.

UTILITIES:
POWER: PUGET SOUND ENERGY SERVICES
WATER: CITY OF PORT ORCHARD
SEWER: CITY OF PORT ORCHARD
TELEPHONE: QWEST
REFUSE: WASTE MANAGEMENT
FIRE PROTECTION: SOUTH KITSAP FIRE & RESCUE

PARKING REQUIRED

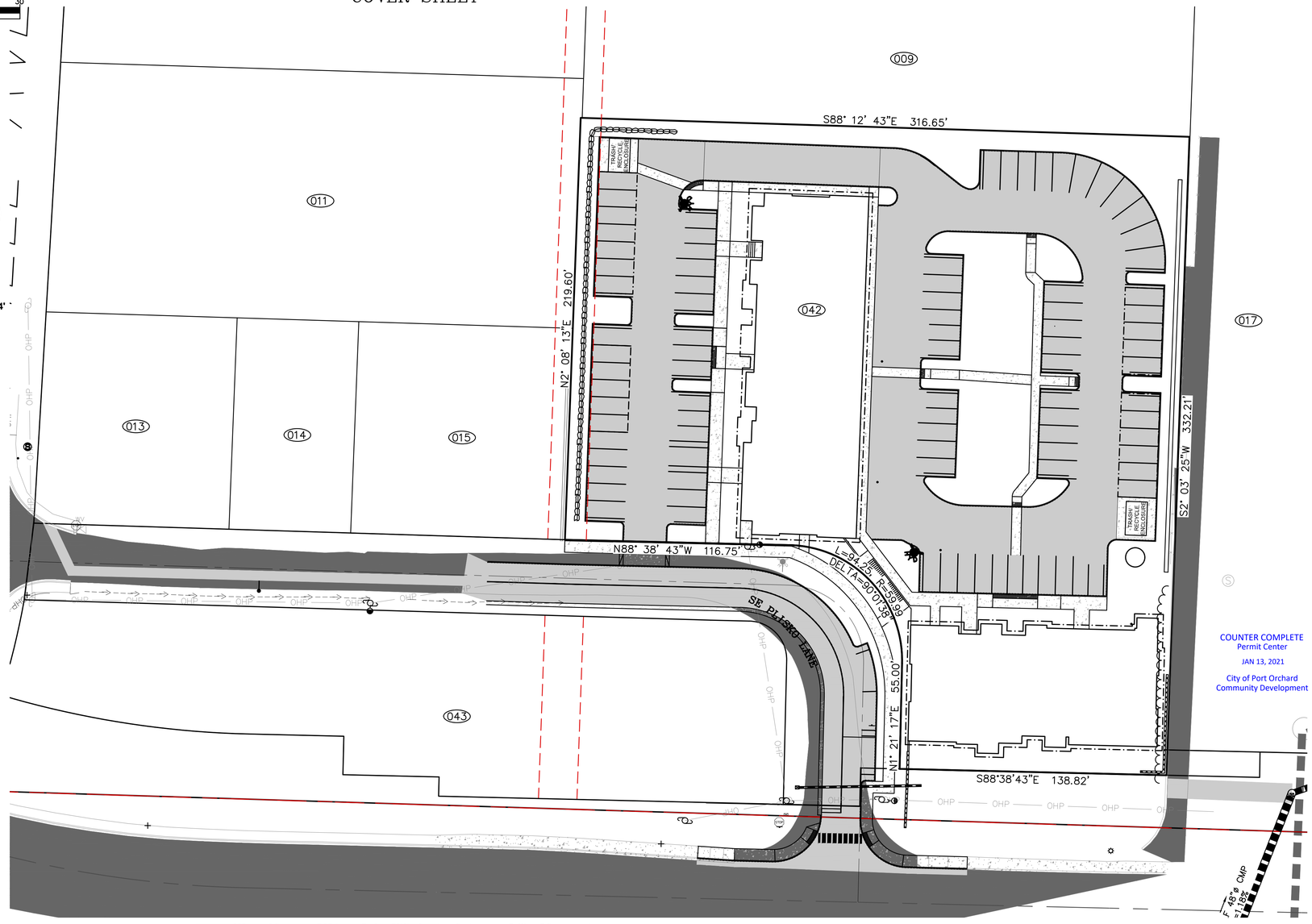
1-BR APTS	39 @ 1.5 STALLS	= 59
2-BR APTS	15 @ 1.75 STALLS	= 27
3-BR APTS	3 @ 2 STALLS	= 6
	TOTAL REQ'S =	92 SPACES

PARKING PROVIDED

OFF-STREET		
STANDARD STALLS	=	60 SPACES
COMPACT STALLS	=	20 SPACES, 20%
ADA STALLS	=	4 SPACES
ADA EV STALL	=	1 SPACE
EV STALL	=	1 SPACE
GARAGE STALLS	=	9 SPACES
GARAGE EV STALL	=	3 SPACES
ON-STREET PARKING	=	3 SPACES
TOTAL	=	101 SPACES

GRAPHIC SCALE
30 0 15 30
(IN FEET)
1 inch = 30 feet

DATUM
NAD 88
DATUM + 136.44'



COUNTER COMPLETE
Permit Center
JAN 13, 2021
City of Port Orchard
Community Development

Sheet List Table	
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2	SITE PLAN
3	EXISTING CONDITIONS
4	TESC PLAN
5	STANDARD NOTES & AMMENDED SOILS
6	TESC DETAILS
7	GRADING PLAN
8	WATER PLAN & PROFILE
9	SEWER PLAN & PROFILE
10	STORM PLAN & PROFILE
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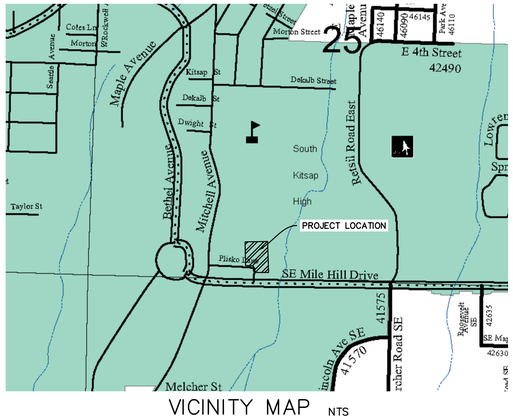
12	STRIPING AND SIGNAGE PLAN
13	DETAILS
14	DETAILS
15	DETAILS
16	DETAILS
17	DETAILS
18	DETAILS
19	DETAILS
20	DETAILS
21	ROAD SECTIONS



VICINITY MAP NTS

PW21-002
PW21-003

BOUNDARY INFORMATION PROVIDED BY ADA ENGINEERING.
SEE SURVEY DRAWING FOR JOB ORDER #06-S5409
VOL. 50, PG. 84 (ROS)

ADDITIONAL TOPO PROVIDED BY TEAM 4 ENGINEERING

DESIGN MAK
DRAWN JKA
CHECKED MAK
SEC 25 T 24N R 1E
DISC NO DATE 12/01/2020
SCALE 1" = 30'

REV NO	REVISION DESCRIPTION	DATE	BY

1/12/2021

TITLE PLISKO LN MULTI FAMILY
COVER SHEET

CLIENT DISNEY & ASSOCIATES
BOB DISNEY
5706 BETHEL RD, STE 100
PORT ORCHARD, WA 98367
(360) 895-7747

SIGNATURE

PROJECT MANAGER JASON K ANDERSON, EIT

TEAM 4 ENGINEERING
5819 NE MINDER RD
POULSBO, WA. 98370
(360) 297-5560
(360) 297-7951 (FAX)

SHEET 1 OF 21

FILE NO 483D

PLISKO LN MULTI FAMILY

SITE PLAN

DATUM

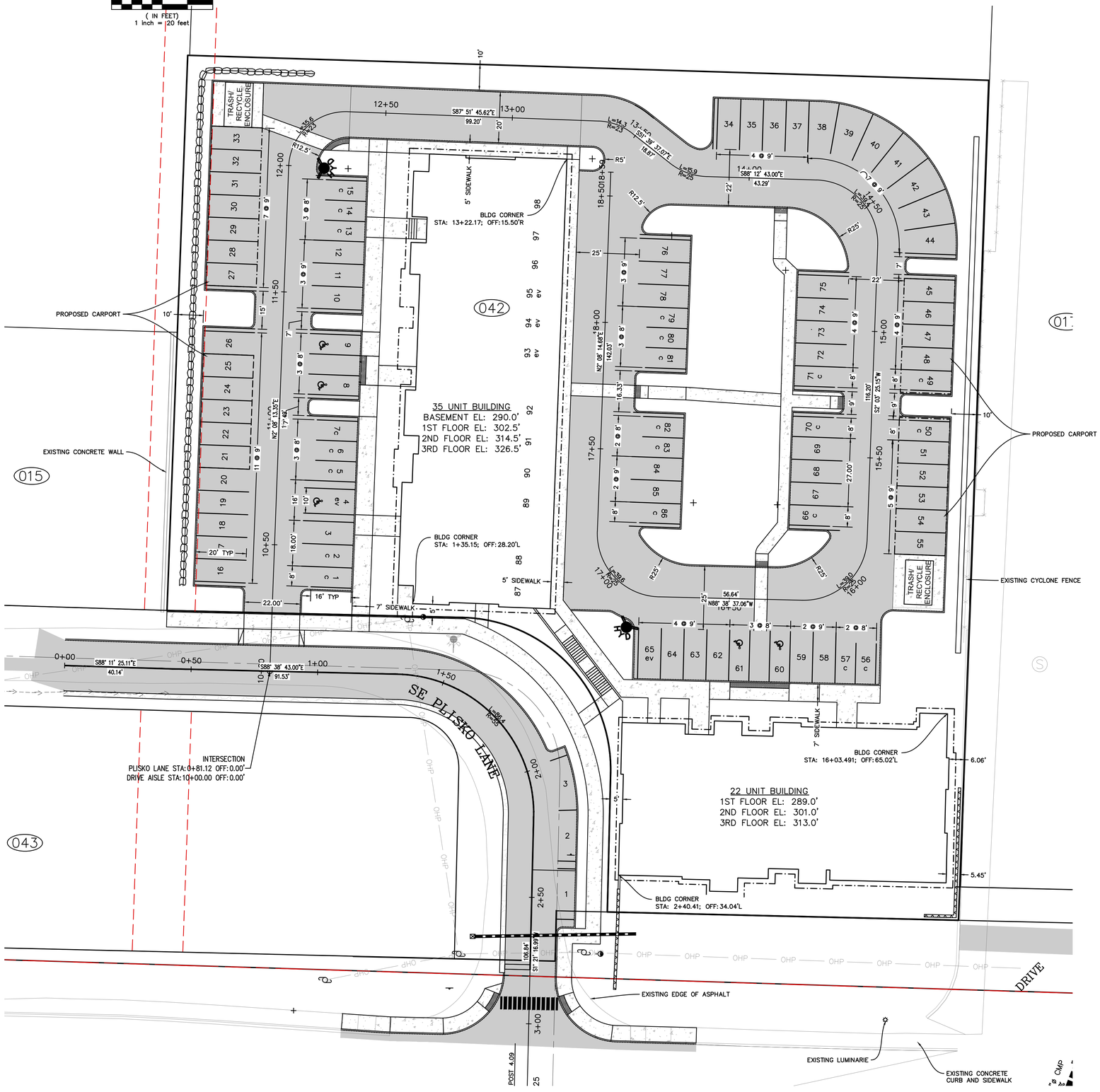
NAD 88

DATUM + 136.44'

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 feet



LEGEND (PROPOSED)

	T4-P-ALIGNMENT MARKER
	T4-P-BENCHMARK
	T4-P-BUILDING
SAMPLE TEXT	T4-P-BUILDING-TEXT
	T4-P-CENTERLINE
	T4-P-CLEARING LIMITS
	T4-P-ESMT
SAMPLE TEXT	T4-P-ESMT-TEXT
	T4-P-LOTLINE
	T4-P-PARKING
	T4-P-PARKING-TEXT
	T4-P-PAVEMENT-HATCH
	T4-P-SEWER
	T4-P-SEWER-CLEAN-OUT
	T4-P-SEWER-FORCEMAIN
	T4-P-SEWER-MANHOLE
	T4-P-SEWER-SERVICE
SAMPLE TEXT	T4-P-SEWER-TEXT
	T4-P-SIDEWALK
	T4-P-SIDEWALK-DRIVECUT-HATCH
	T4-P-SIDEWALK-HATCH
	T4-P-SIDEWALK-RAMP-HATCH
SAMPLE TEXT	T4-P-SITE-TEXT
	T4-P-SPOTS
	T4-P-STORM
	T4-P-STORM-DISPERSION TRENCH
	T4-P-STORM FLOW ARROWS
	T4-P-STORM-RIPRAP-HATCH
	T4-P-STORM-STRUCTURES (TYPE 1)
	T4-P-STORM-STRUCTURES (TYPE 2)
SAMPLE TEXT	T4-P-STORM-TEXT
	T4-P-WALL-CONCRETE
	T4-P-WALL-ROCK
	T4-P-WATER
	T4-P-WATER-FIRE HYDRANT
	T4-P-WATER-SERVICE
	T4-P-WATER-SERVICE (METER)
SAMPLE TEXT	T4-P-WATER-TEXT
	T4-P-WATER-VALVE

COUNTER COMPLETE
Permit Center
JAN 13, 2021
City of Port Orchard
Community Development

PW21-002
PW21-003

DESIGN MAK
DRAWN JKA
CHECKED MAK
SEC 25 T 24N R 1E
DISC NO DATE 12/01/2020
SCALE 1" = 20'

REV NO	REVISION DESCRIPTION	DATE	BY

KUHLMAN 18849 REGISTERED PROFESSIONAL ENGINEER STATE OF WASHINGTON
1/12/2021

PROJECT MANAGER JASON K ANDERSON, EIT

SIGNATURE

TITLE PLISKO LN MULTI FAMILY
SITE PLAN

CLIENT DISNEY & ASSOCIATES
BOB DISNEY
5706 BETHEL RD, STE 100
PORT ORCHARD, WA 98367
(360) 895-7747

TEAM 4 PROJECT MANAGEMENT ENGINEERING PLANNING CONSULTING

TEAM 4 ENGINEERING
5819 NE MINDER RD
POULSBO, WA. 98370
(360) 297-5560
(360) 297-7951 (FAX)

SHEET 2 OF 21

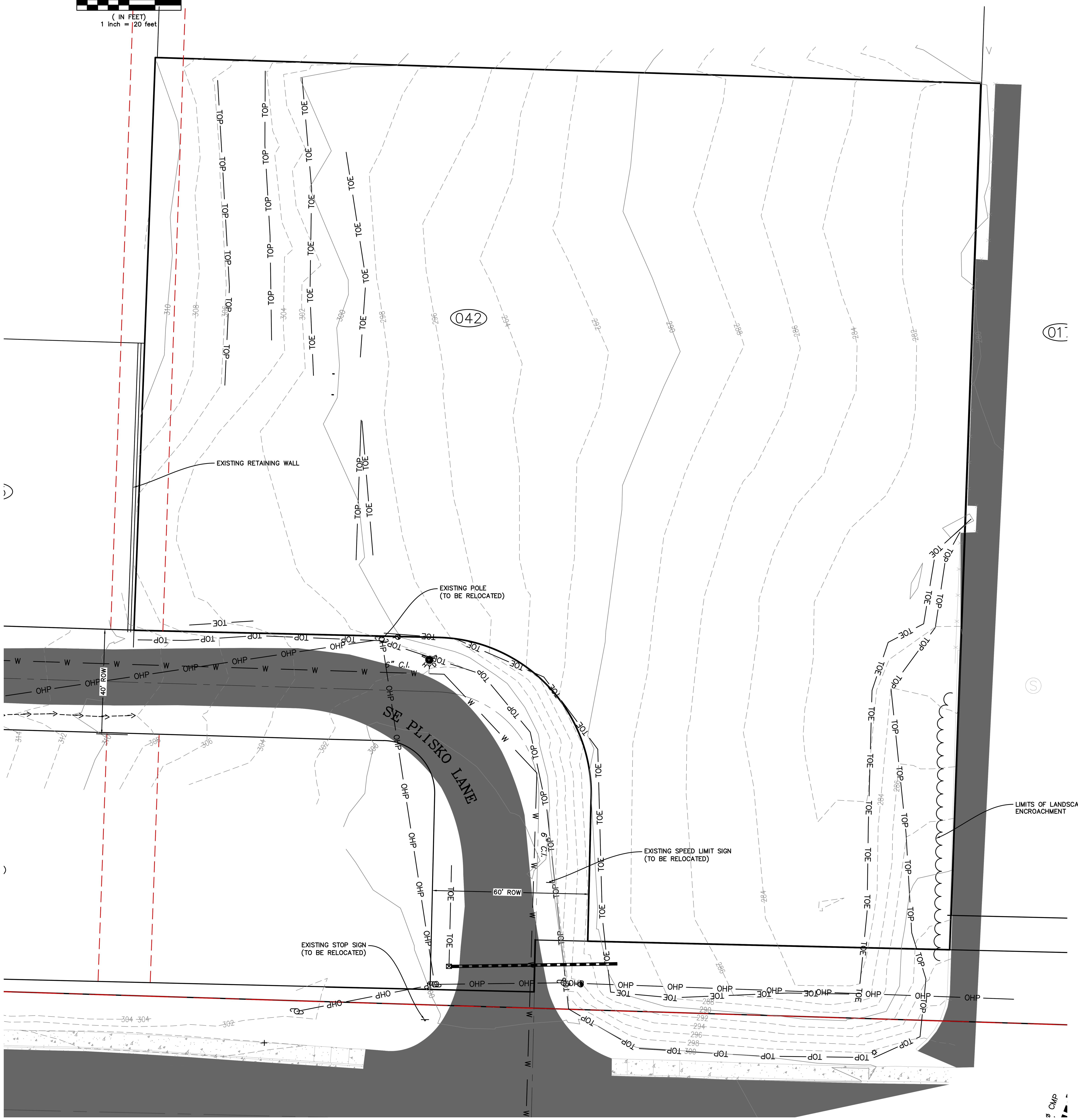
FILE NO 483D

PLISKO LN MULTI FAMILY

EXISTING CONDITIONS

DATUM
NAD 88
DATUM + 136.44'

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 feet



LEGEND (EXISTING)

	T4-EX-BOUNDARY
SAMPLE TEXT	T4-EX-BOUNDARY-TEXT
	T4-EX-BUILDING
SAMPLE TEXT	T4-EX-BUILDING-TEXT
	T4-EX-CREEK BANK
	T4-EX-CREEK CENTERLINE
	T4-EX-CREEK-HATCH
SAMPLE TEXT	T4-EX-CREEK-TEXT
	T4-EX-CRITICAL AREA
	T4-EX-CRITICAL AREA-HATCH
SAMPLE TEXT	T4-EX-CRITICAL AREA-TEXT
	T4-EX-ESMT
SAMPLE TEXT	T4-EX-ESMT-TEXT
	T4-EX-GRAVEL
	T4-EX-GRAVEL-HATCH
SAMPLE TEXT	T4-EX-GRAVEL-TEXT
	T4-EX-GUARDRAIL
094 OR 094	T4-EX-PARCEL ID
	T4-EX-PAVEMENT
	T4-EX-PAVEMENT-HATCH
SAMPLE TEXT	T4-EX-PAVEMENT-TEXT
	T4-EX-POWER-OVERHEAD
SAMPLE TEXT	T4-EX-POWER-TEXT
	T4-EX-POWER-UNDERGROUND
	T4-EX-ROW
SAMPLE TEXT	T4-EX-ROW-TEXT
	T4-EX-SEWER
	T4-EX-SEWER FORCEMAIN
SAMPLE TEXT	T4-EX-SEWER-TEXT
	T4-EX-SIDEWALK
	T4-EX-SIDEWALK-HATCH
	T4-EX-STORM
	T4-EX-STORM-DITCH
SAMPLE TEXT	T4-EX-STORM-TEXT
	T4-EX-TELECOM
	T4-EX-WATER
	T4-EX-WATER-APPURTENANCES
SAMPLE TEXT	T4-EX-WATER-TEXT
	T4-EX-WATER-VALVE
	T4-EX-WETLAND BOUNDARY
	T4-EX-WETLAND-HATCH
SAMPLE TEXT	T4-EX-WETLAND-TEXT
	T4-EX-RETAINING WALL
	T4-EX-ROCKERY

COUNTER COMPLETE
Permit Center
JAN 13, 2021
City of Port Orchard
Community Development

PW21-002
PW21-003

DESIGN	MAK
DRAWN	JKA
CHECKED	MAK
SEC 25 T 24N R 1E	
DISC NO	DATE 12/01/2020
SCALE	1" = 20'

REV NO	REVISION DESCRIPTION	DATE	BY

MARK A. KUHLMAN
STATE OF WASHINGTON
18648
PROFESSIONAL ENGINEER
1/12/2021

TITLE PLISKO LN MULTI FAMILY
EXISTING CONDITIONS

CLIENT
DISNEY & ASSOCIATES
BOB DISNEY
5706 BETHEL RD, STE 100
PORT ORCHARD, WA 98367
(360) 895-7747

SIGNATURE:
PROJECT MANAGEMENT • ENGINEERING • PLANNING • CONSULTING

PROJECT MANAGER: JASON K ANDERSON, EIT

TEAM 4 ENGINEERING
5819 NE MINDER RD
POULSBO, WA. 98370
(360) 297-5560
(360) 297-7951 (FAX)

SHEET 3 OF 21
FILE NO 483D

PLISKO LN MULTI FAMILY

TESC PLAN

DATUM

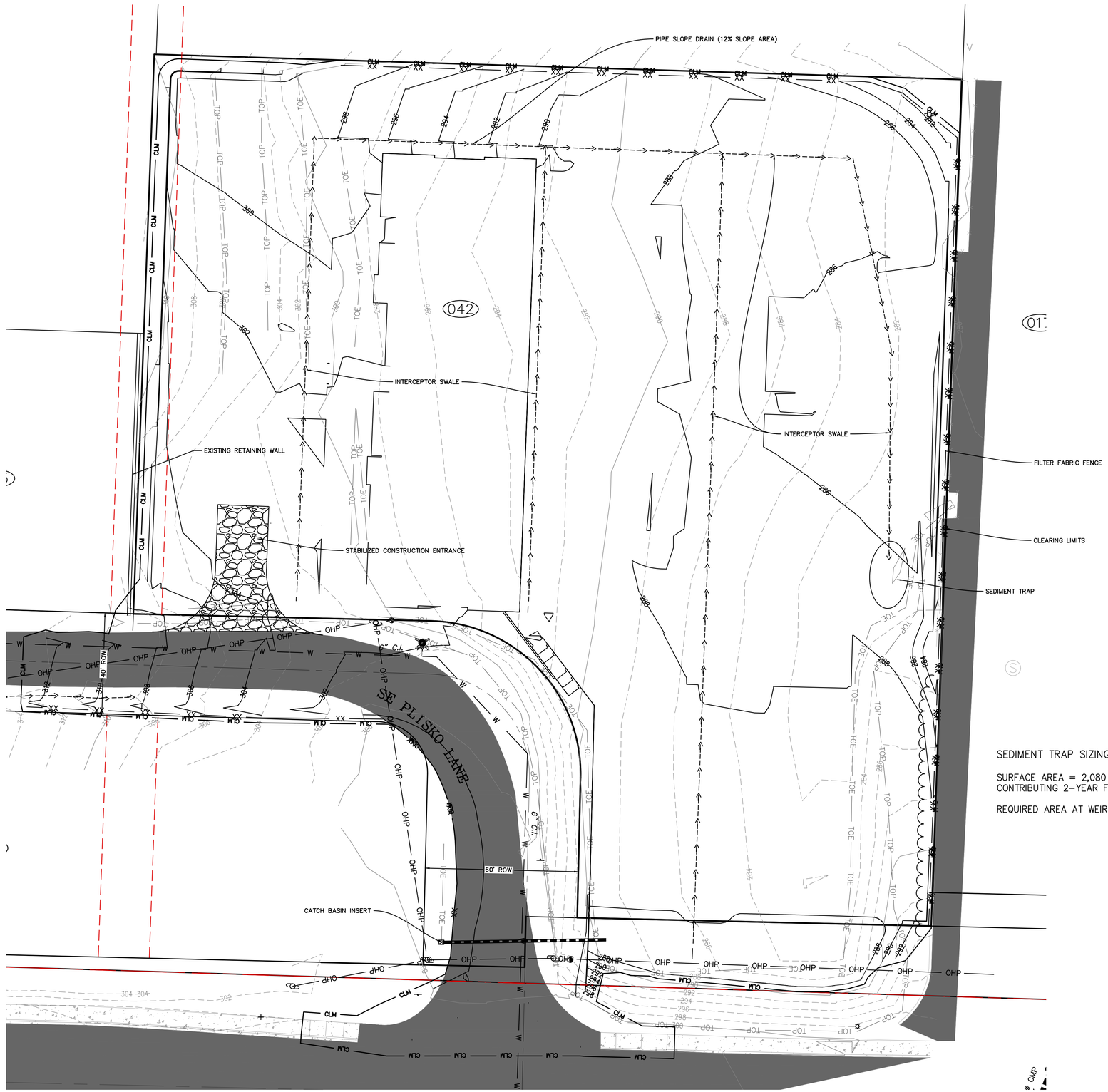
NAD 88

DATUM + 136.44'

GRAPHIC SCALE

20 0 10 20

(IN FEET)
1 inch = 20 feet



COUNTER COMPLETE
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SEDIMENT TRAP SIZING:

SURFACE AREA = 2,080 S.F. / CFS (SWMWW, VOL 2, C 4, PG 384)
CONTRIBUTING 2-YEAR FLOW RATE FROM MODEL = 0.14 CFS

REQUIRED AREA AT WEIR = 291 S.F.

PW21-002
PW21-003

DESIGN MAK
DRAWN JKA
CHECKED MAK
SEC 25 T 24N R 1E
DISC NO DATE12/01/2020
SCALE 1" = 20'

REV NO	REVISION DESCRIPTION	DATE	BY

KUHLMAN A. KUHLMAN 18949 REGISTERED PROFESSIONAL ENGINEER STATE OF WASHINGTON
1/12/2021

SIGNATURE:

TITLE PLISKO LN MULTI FAMILY
TESC PLAN

CLIENT DISNEY & ASSOCIATES
BOB DISNEY
5706 BETHEL RD, STE 100
PORT ORCHARD, WA 98367
(360) 895-7747

PROJECT MANAGER JASON K. ANDERSON, EIT

TEAM 4 ENGINEERING
5309 NE MINDER RD
POULSBO, WA. 98370
(360) 297-5560
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SHEET 4 OF 21

FILE NO 483D

PLISKO LN MULTI FAMILY

STANDARD NOTES & AMMENDED SOILS

General Notes:

1. All construction shall be in accordance with all currently adopted WSDOT and APWA Specifications and Plans, and the City of Port Orchard Municipal Code, the currently adopted City of Port Orchard Developer's Handbook, the currently adopted Surface Water Design Manual and the conditions of preliminary subdivision approval. It shall be the sole responsibility of the applicant and the professional civil engineer to correct any error, omission, or variation from the above requirements found in these plans. All corrections shall be at no additional cost or liability to the City of Port Orchard.
2. The design elements within these plans have been reviewed according to the Port Orchard Design Standards. Some elements may have been overlooked or missed by the City of Port Orchard City Engineer. Any deviation from adopted standards is not allowed unless specifically approved by the City of Port Orchard City Engineer, prior to construction.
3. Approval of these engineering plans such as for roads, grading, or drainage does not constitute an approval of any other design (e.g., water, sewer, gas, electrical, etc.).
4. Before any construction or development activity, a preconstruction meeting must be held between the City of Port Orchard Public Works Department, the Applicant and the Applicant's Construction Representative.
5. Proof of liability insurance shall be submitted to the City of Port Orchard prior to the preconstruction meeting.
6. A copy of these approved plans must be on the job site whenever construction is in progress.
7. Construction noise shall comply with the current POMC Section 9.24.050.
8. It shall be the Applicant /Contractor's responsibility to obtain all right-of-way permits and construction easements necessary before initiating off-site work within a City of Port Orchard street right-of-way.
9. Franchised utilities or other installations that are not shown on these approved plans shall not be constructed unless an approved set of plans is submitted to the City of Port Orchard prior to construction.
10. The vertical datum shall be NAVD 1988 and the horizontal datum shall be NAD 1983 HARN State Plane Washington North FIPS 4601 feet.
11. Groundwater system construction shall be within a right-of-way or appropriate drainage easement, but not underneath the roadway section.
12. All utility trenches shall be backfilled and compacted in accordance with the City of Port Orchard Standards.
13. All roadway subgrade shall be backfilled, compacted to 95% maximum density and prepared for surfacing in accordance with WSDOT Standard Specification 2-06.3.
14. Open cutting of existing roadways is not allowed unless specifically approved by the City of Port Orchard City Engineer and noted on these approved plans. Any open cut shall be restored in accordance with the City of Port Orchard Standard Specifications.
15. The Contractor shall be responsible for providing adequate safeguards, safety devices, protective equipment, flaggers, and any other needed actions to protect the life, health, and safety of the public, and to protect property in connection with the performance of work covered by the contract. Any work within the traveled right-of-way that may interrupt normal traffic flow shall require at least one flagger for each lane of traffic affected. Refer to "Traffic Control," of the WSDOT Standard Specifications shall apply in its entirety. Traffic control plans shall follow the currently adopted MUTCD Manual as applicable.

To protect significant trees from the impacts of the proposed development, the Applicant shall provide the best protection for significant trees per the regulations. At a minimum, any significant trees to be retained shall be fenced two feet outward from the identified drip line. Trees that sustain damage during construction shall be replaced pursuant to POMC. A representative of the City of Port Orchard DCD Staff shall verify protective fencing placement per this condition prior to issuance of a notice to proceed for grading and clearing. The City shall inspect for compliance with the tree plan prior to a final inspection. The inspection shall also evaluate the condition of retained trees and any and all corrections will be required to be completed prior to a final inspection and release of any post financial guarantees for the site.

Drainage Notes (also refer to Chapter 9 Surface Water Drainage):

16. All storm pipe and appurtenances shall be laid in accordance with City of Port Orchard Design and Construction Standards. This shall include leveling and compacting the trench bottom, the top of the foundation material and any required bedding to a uniform grade so that the entire drainage facility is supported by a uniformly dense unyielding base.
17. All storm pipe shall be subject to a low-pressure air test in accordance with WSDOT Standard Specification 7-04.3(1)F and a video inspection in accordance with the Port Orchard Design Standards.
18. Storm pipe cover, measured from the finished grade elevation to the top of the outside surface of the pipe, shall be 2 feet minimum, unless authorized by the City of Port Orchard City Engineer under the following circumstances:
a. Under driveways the pipe cover may be reduced to 1 foot minimum if the 2-feet cannot be achieved and the cover is consistent with the pipe manufacturer's recommendations.
b. In areas not subject to vehicular loads, such as landscape planters and yards, the pipe cover may be reduced to 1 foot minimum.
c. If ductile iron pipe or C900 pipe is used, the pipe cover may be reduced to 1 foot minimum.
19. Steel pipe shall be galvanized and have asphalt treatment #1 or better inside and out (WSDOT Standard Specification 9-05.4(3)).
20. Any drainage structure, such as a catch basin or a manhole, not receiving surface runoff and not located within a traveled roadway or sidewalk shall have a solid locking lid. Any drainage structure associated with a permanent retention/detention facility, not receiving surface runoff, shall have a solid locking lid.
21. All catch basin grates shall conform to the currently adopted Stormwater Management Manual and the WSDOT Standard Plans when located within the right-of-way, and shall include a combination inlet frame (open-curb-face frame), when located in a sump condition or before an intersection with a 4% grade or above. A herringbone grate may be used outside the right-of-way. All catch basins within the gutter line shall be installed in accordance with the City of Port Orchard Standard Details as applicable. Maximum catch basin height from finished grade to pipe invert shall be per the applicable detail.
22. For any curb grade less than 0.8% (0.0080 ft/ft), including curb returns, a professional Land Surveyor, currently licensed in the State of Washington, shall verify that the curb forms or string lines are at the grades noted on the approved plans prior to placement of concrete. The contractor is responsible for survey coordination and costs.
23. For any drainage pipe grade less than 0.5% (0.0050 ft/ft), a professional Land Surveyor, currently licensed in the State of Washington, shall verify that the as-built pipe matches the grades noted on the approved plans prior to completion of subgrade. The contractor is responsible for survey coordination and costs.
24. All driveway culverts located within the City of Port Orchard right-of-way shall be of sufficient length to provide a minimum 3:1 slope from the edge of the driveway to the bottom of the ditch. Culverts shall have beveled end sections to match the side slope.
25. Rock for erosion protection of ditches, where required, must be of sound quarry rock, placed to a depth of one foot (1'), and must meet the following specifications: 100% must pass the 8" sieve, 40% maximum can pass the 3" sieve and 10% maximum can pass the 3/4" sieve.
26. Drainage outlets (stub-outs) shall be provided for each individual lot, except for those lots approved for infiltration by the City of Port Orchard. Stub-outs shall conform to the following:
a. Each outlet shall be suitably located at the lowest elevation on the lot to service all future roof downspouts and footing drains, driveways, yard drains, and any other surface or subsurface drains necessary to render the lots suitable for their intended use. Each outlet shall have free-flowing, positive drainage to an approved stormwater conveyance system or to an approved outfall location.
b. Outlets on each lot shall be located with a five-foot-high, 2" x 4" stake marked "storm" or "drain". The stub-out shall extend above surface level, be visible, and be secured to the stake.
c. Pipe material shall be in accordance with Port Orchard Design Standards. If non- metallic, the pipe shall contain a wire or use other acceptable means of detection.
d. Drainage easements are required for drainage systems designed to convey flows through individual lots.
e. The Applicant/Contractor is responsible for coordinating the locations of all stubout conveyance lines with respect to other utilities (e.g., power, gas, telephone, television, etc.).
f. All individual stub-outs shall be privately owned and maintained by the lot homeowner.

Erosion and Sediment Control Notes (also refer to Chapter 9 Surface Water Drainage):

27. Approval of these Temporary Erosion and Sediment Control (TESC) plans does not constitute an approval of permanent road or drainage design (e.g., size and location of roads, pipes, restrictors, channels, retention facilities, utilities, etc.).
28. The implementation of these TESC plans and the construction, maintenance, replacement, and upgrading of these TESC facilities is the responsibility of the applicant/CESCL until all construction is approved.
29. The boundaries of the clearing limits shown on these plans shall be clearly flagged by a continuous length of survey tape (or fencing, if required) prior to construction. During the construction period, no disturbance beyond the clearing limits shall be permitted. The clearing limits shall be maintained by the applicant/CESCL for the duration of construction.
30. Stabilized construction entrances, in accordance with Standard Details shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures, such as constructed wheel wash systems or wash pads, may be required to ensure that all paved areas are kept clean and track-out to street right-of- way does not occur for the duration of the project.
31. The TESC facilities shown on these plans must be constructed prior to all clearing and grading to ensure that the transport of sediment to surface waters, drainage systems, and adjacent properties is reduced to required levels.
32. The TESC facilities shown on these plans are the minimum requirements for anticipated site conditions. During the construction period, these TESC facilities shall be upgraded as needed for unexpected storm events and modified to account for changing site conditions (e.g., additional cover measures, additional sump, pumps, relocation of ditches and silt fences, additional perimeter protection, etc.), as directed by the City Engineer.
33. The TESC facilities shall be inspected daily by the applicant/CESCL and maintained to ensure continued proper functioning. Written records shall be kept of weekly reviews of the TESC facilities and of samples taken during the wet season (October 1 to April 30) and of monthly reviews during the dry season (May 1 to September 30).
34. Any areas of exposed soils, including roadway embankments, that will not be disturbed for two days during the wet season or seven days during the dry season shall be immediately stabilized with the approved TESC methods (e.g., seeding, mulching, plastic covering, etc.).
35. Any area needing TESC measures not requiring immediate attention shall be addressed within seven (7) days.
36. The TESC facilities on inactive sites shall be inspected and maintained a minimum of once a month or within twenty-four (24) hours following a storm event.
37. At no time shall more than one (1) foot of sediment be allowed to accumulate within a catch basin. All catch basins and conveyance lines shall be cleaned prior to final inspection. The cleaning operation shall not flush sediment-laden water into a downstream system.
38. Any permanent flow control facility used as a temporary settling basin shall be modified with the necessary erosion control measures and shall provide adequate storage capacity. If the facility is to function ultimately as an infiltration system, the temporary facility must be graded so that the bottom and sides are at least three (3) feet above the final grade of the permanent facility.
39. Where straw mulch for temporary erosion control is required, it shall be applied at a minimum thickness of 2 to 3 inches.
40. Prior to the beginning of the wet season (October 1), all disturbed areas shall be reviewed to identify which areas can be seeded in preparation for the winter rains. Disturbed areas shall be seeded within one week of the beginning of the wet season. -A sketch map of those areas to be seeded and those areas to remain uncovered shall be submitted to the City of Port Orchard City Engineer. The inspector can require seeding of additional areas in order to protect surface waters, adjacent properties, or drainage facilities.

Structural Notes, (also refer to Chapter 8 Structures):

41. These plans are approved for construction of the standard road and drainage improvements only. Plans for structures such as bridges, vaults, and retaining walls require a separate review, approval and building permit by the City of Port Orchard Department of Community Development prior to construction.
42. Rockeries are considered to be a method of bank stabilization and erosion control. Rockeries shall not be constructed in fill conditions to serve as retaining walls. All rockeries shall be constructed in accordance with the rock wall construction guidelines published by the Associated Rockery Contractors.
43. Mechanically stabilized earth, or reinforced soil, walls shall be designed and stamped by a professional engineer licensed in Washington State.

Recommended Construction Sequence:

44. Conduct a pre-construction meeting with the Public Works Department.
45. Post "Notice of Construction Activity" sign with name and phone number of the CESCL.
46. Flag or fence clearing limits and significant trees.
47. Install catch basin protection, if required.
48. Grade and install construction entrance(s).
49. Install perimeter protection (silt fence, brush barrier, etc.).
50. Construct sediment ponds and traps.
51. Grade and stabilize construction roads.
52. Construct surface water controls (interceptor ditches, pipe slope drains, etc.) simultaneously with clearing and grading for project development.
53. Maintain erosion control measures in accordance with the City of Port Orchard standards and manufacturer's recommendations.
54. Relocate surface water controls and erosion control measures, or install new measures to ensure that as site conditions change the erosion and sediment control is always in accordance with the City of Port Orchard Erosion and Sediment Control Standards.
55. Cover all areas that will be idle for more than seven days during the dry season or two days during the wet season with straw, wood fiber mulch, compost, plastic sheeting, or equivalent.
56. Stabilize all areas that reach final grade within seven days.
57. Seed or sod any areas to remain idle until seed or sod is established.
58. Upon completion of the project, all disturbed areas must be stabilized and best management practices removed, if appropriate.

Design Standard: Amendment of Disturbed Soils

Application

Amend existing or imported soils to provide flow control (quantity) and water quality treatment. Use in new construction where soils have been disturbed, renovations where plant health is poor and near runoff source where pesticides would cause contamination.
This technique can be used under conventional stormwater ponds, filter strips, bioretention area, or dispersion areas.

Naturally occurring (undisturbed) soil and vegetation provide important stormwater management functions including: water infiltration; nutrient, sediment, and pollutant adsorption; sediment and pollutant biofiltration; water interflow storage and transmission;
and pollutant decomposition. These functions are largely lost when development strips away native soil and vegetation and replaces it with minimal soil and sod. Not only are these important stormwater management functions lost, but such landscapes themselves become pollution-generating pervious surfaces due to increased use of pesticides, fertilizers and other landscaping and household/industrial chemicals, the concentration of pet wastes, and pollutants that accompany roadside litter.

Establishing a minimum soil quality and depth is not the same as preservation of naturally occurring soil and vegetation. However, establishing a minimum soil quality and depth by amending disturbed soils with compost regains greater stormwater management functions in the post development landscape, provides increased treatment of pollutants and sediments that result from development and habitation, and minimizes the need for some landscaping chemicals, thus reducing pollution through prevention.

Variables

Application rates and techniques for incorporating amendments will vary with the use and plant requirements of the area. Landscape with high pedestrian traffic (notably lawns) during wet months will require specific amendments to prevent spongy soils.

Post construction soil quality and depth restoration is required on all sites wherever existing soil or vegetation is disturbed. Areas of sites where existing vegetation and soil are not compacted or disturbed do not have to be restored.

Advantages & Disadvantages (Whole System Perspective)

Native soil protection and amendments should be first LID strategies considered. Soil amendments improve the quality and health of the soil and plantings. Some of the issues
include:

Advantages

- Reduced stormwater runoff / increased moisture retention;
- Reduced irrigation needs;
- Improved water quality through pollutant adsorption and biofiltration;
- Plant establishment and health;
- Improved infiltration;
- Increased sediment filtration;
- Reduced erosion;
- Reduced compaction;
- Reduced fertilizer/pesticide use.

Disadvantages

- Increased cost;
- Designating an area for staging materials and amending soils;
- Increased export and import costs;
- Foot-traffic issues associated with slow-draining soils.

Data Requirements

Determine soils quality, including organic material; hydrologic characteristics; soil texture, structure, and depth; and biota. Be careful using soils amendments in areas that will have the potential to become compacted.

Schematic

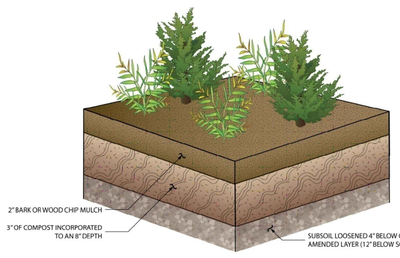

Figure 6.1: Cross Section of Planting Bed Soil Amendment. (Source: Seattle Public
Utilities/Seattle Department of Planning and Development)

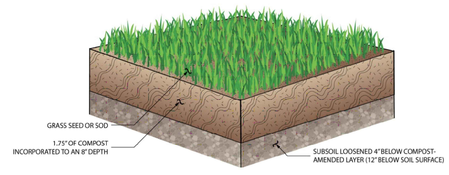

Figure 6.2: Cross Section of Turf Soil Amendment. (Source: Seattle Public
Utilities/Seattle Department of Planning and Development)

Specification

It is important that the compost or other organic materials used to meet the soil quality and depth necessary be appropriate and beneficial to the plant cover to be established. Likewise, it is important that imported topsoils improve soil conditions and do not have an excessive percent of clay or silt fines that might restrict stormwater infiltration.

Soil Retention

The duff layer and native topsoil should be retained in an undisturbed state and protected from compaction to the maximum extent practical. In any areas requiring grading, remove and stockpile the duff layer and topsoil on site in a designated, controlled area, not adjacent to public resources and critical areas, to be reapplied to other portions of the site where feasible.

Soil Quality

All areas subject to clearing and grading that have not been covered by impervious surface, incorporated into a drainage facility or engineered as structural fill or slope shall, at project completion, demonstrate the following:

- A topsoil layer meeting these requirements:
  - o Topsoil shall have a minimum organic matter content by the loss-on-ignition test of 8 percent dry weight in planting beds, or 4 percent organic matter content in turf areas, and a pH from 6.0 to 8.0 or matching the pH of the original undisturbed soil. (Acceptable test methods for determining loss-on ignition soil organic matter include the most current version of ASTM D2974 "Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils" and TMECC 05.07A "Loss-On-Ignition Organic Matter Method");
  - o The topsoil layer shall have a minimum depth of 8 inches;
  - o Where tree roots limit the depth of incorporation of amendments, those root zones are exempted from this requirement only if they are fenced and protected from stripping of soil, grading, or compaction to the maximum extent practical;
  - o Subsoils below the topsoil layer should be scarified at least 4 inches, for a finished minimum depth of 12 inches of uncompacted soil, with some incorporation of the upper material to avoid stratified layers, where feasible;
- Planting beds must be mulched after planting with 2 inches of organic material such as wood chip, shredded leaves, compost, etc.;
- Quality of compost and other materials used to meet the organic content requirements:
  - o The organic content for "pre-approved" amendment rates can be met only using compost that meets the definition of "composted materials" in WAC 173-350 section 220. This code is available at the Dept. of Ecology's website: http://www.ecy.wa.gov/programs/swfa/compost/.
  - The compost must also have an organic matter content of 40 percent to 65 percent, and a carbon to nitrogen ratio below 25:1. The carbon to nitrogen ratio may be as high as 35:1 for plantings composed entirely of plants native to the Puget Sound Lowlands region;
  - o Calculated amendment rates may be met through use of composted materials as defined above; or other organic materials amended to meet the carbon to nitrogen ratio requirements, and meeting the contaminant standards of specified in WAC 173-350 section 220. The method for calculating custom amendment rates is established in the Building Soil
  manual referenced below;

The resulting soil should be conducive to the type of vegetation to be established.

General Installation Requirements

Implementation Options

The soil quality design guidelines listed above can be met by using one of the four methods listed below:

- Leave undisturbed vegetation and soil, protect from compaction by fencing and keeping materials storage and equipment off these areas during construction;
- Amend existing site topsoil or subsoil either at default "pre-approved" rates, or at custom calculated rates to meet the soil quality guidelines above based on specifiers' tests of the soil and amendment. The default pre-approved rates are:
  - o in planting beds, place 3 inches of compost and till in to an 8 inch depth;
  - o in turf areas, place 1.75 inches of compost and till in to an 8 inch depth;
- Stockpile existing topsoil during grading, and replace it prior to planting. Stockpiled topsoil must also be amended if needed to meet the organic matter or depth requirements, either at the default "pre-approved" rate or at a custom calculated rate (see Building Soil manual or website, below, for custom calculation method);Import topsoil mix of sufficient organic content and depth to meet the requirements. Imported soils should not contain excessive clay or silt fines (excessive is defined as more than 5% passing the No. 200 sieve) because that could restrict stormwater infiltration. The default pre-approved rates for imported topsoils are:
  - o For planting beds, a mix by volume of 35 percent compost with 65 percent mineral soil is pre-approved to achieve the requirement of 8 percent organic matter by loss-on-ignition test;
  - o For turf areas, a mix by volume of 20 percent compost with 80 percent mineral soil is pre-approved to achieve the requirement of 4 percent organic matter by loss-on-ignition test.

More than one method may be used on different portions of the same site. Soil that already meets the depth and organic matter quality standards, and is not compacted, does not need to be amended.

Soil Management Plan

A "Soil Management Plan" is required, including:

- A site map showing areas to be fenced and left undisturbed during construction, and areas that will be amended at the turf or planting bed rates;
- Calculations of the amounts of compost, compost amended topsoil, and mulch to be used on the site;
- Sample forms for the Soil Management Plan, and more guidance on these procedures, can be found in the Building Soil manual, available on the www.soilsforsalmon.org website.

Construction Specifications and Criteria

Minimum construction requirements include the following:

- Soil quality and depth should be established toward the end of construction and once established, should be protected from compaction, such as from large machinery use, and from erosion;
- Soil should be planted and mulched after installation;
- Inspection and verification procedures will include:
  - o Inspection of delivery tickets for compost, amended soil, and mulch to verify types and quantities match those specified on the Soil Management Plan;
  - o Digging or coring several holes to verify appearance of compost-amended soil to a minimum 8-inch depth and subsoil scarification or uncompacted soil to a minimum 12-inch depth;
  - o Use of a rod pentrometer (3/8 inch rod with handle) every 20 feet across site,to verify that the rod can be pushed into the soil at least 12 inches by the inspector's weight;
  - o Use of a shovel to scrape aside mulch on planting beds in several places to verify a minimum 2-inch mulch depth;
  - o Sample forms for Field Verification, can be found in the Building Soil manual or on the www.soilsforsalmon.org website;

Operations & Maintenance Requirement

Plant debris or its equivalent should be left on the soil surface through mulch-mowing of turf areas, and blowing shredded fall leaves into beds or annual mulching to replenish organic matter.

It should be possible to reduce use of irrigation, fertilizers, herbicides and pesticides. These activities should be adjusted where possible, rather than continuing to implement formerly established practices. In particular, regular use of soluble fertilizers, broadcast herbicides and insecticides degrades soil life and compacts soils. Instead, fertilization can be reduced, using slow-release or organic products, and integrated pest management techniques will minimize the need for pesticides.

Flow Credit

This standard is a required BMP for construction impacted soils, therefore there are no flow credits for implementing this standard.

Enhanced Treatment

Dispersion BMPs - see relevant Standards Sheets.

Permit Requirements — Refer to Jurisdiction Addenda in Appendix J

References

Material for this section was taken directly from Seattle Public Utilities' BMP for Post-Construction Soil Quality and Depth.

COUNTER COMPLETE
Permit Center
JAN 13, 2021
City of Port Orchard
Community Development

PW21-002
PW21-003

DESIGN MAK
DRAWN JKA
CHECKED MAK
SEC 25 T 24N R 1E
DISC NO DATE 12/01/2020
SCALE 1" = 20'

REV NO	REVISION DESCRIPTION	DATE	BY

1/12/2021

TITLE PLISKO LN MULTI FAMILY
STANDARD NOTES & AMMENDED SOILS

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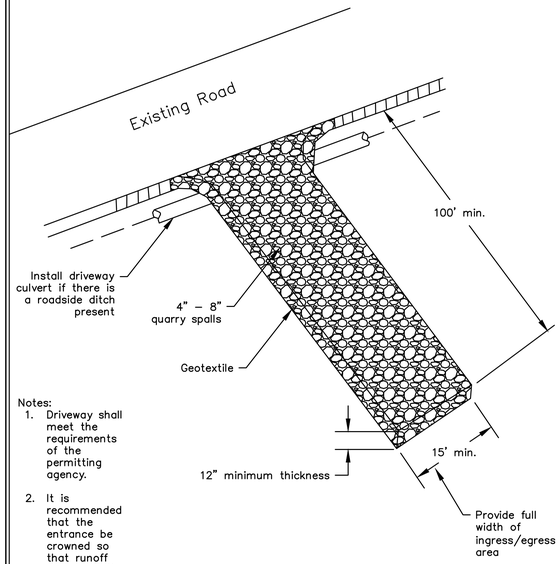
SHEET 5 OF 21

FILE NO 483D

PLISKO LN MULTI FAMILY

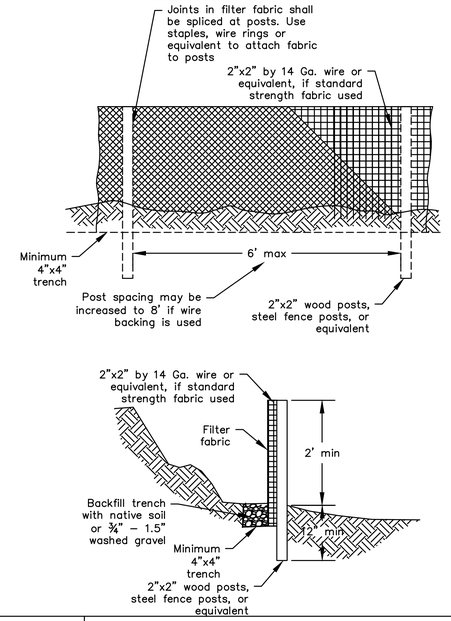
TESC DETAILS

NOT TO SCALE



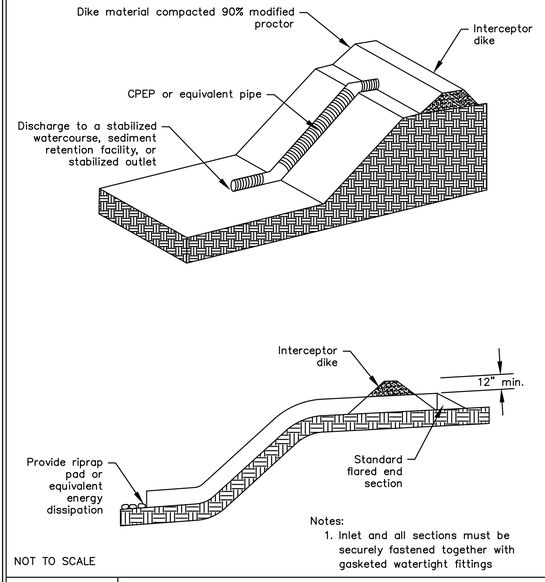
Notes:
1. Driveway shall meet the requirements of the permitting agency.
2. It is recommended that the entrance be crowned so that runoff drains off the pad.

Figure II–4.1.1
Stabilized Construction Entrance
Revised June 2015



NOT TO SCALE

Figure II–4.2.12
Silt Fence
Revised October 2014



Notes:
1. Inlet and all sections must be securely fastened together with gasketed watertight fittings

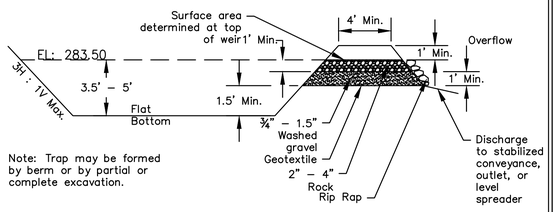
NOT TO SCALE

Figure II–4.2.4
Pipe Slope Drain
Revised July 2015

MAINTENANCE STANDARDS:

1. SEDIMENT SHALL BE REMOVED FROM THE TRAP WHEN IT REACHES I FOOT IN DEPTH.

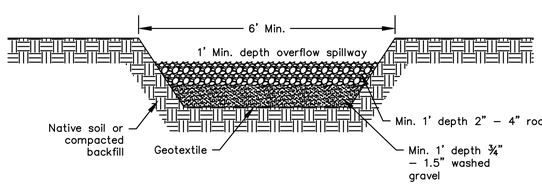
2. ANY DAMAGE TO THE TRAP EMBANKMENTS OR SLOPES SHALL BE REPAIRED.



Note: Trap may be formed by berm or by partial or complete excavation.

NOT TO SCALE

Figure II–4.2.16
Cross Section of Sediment Trap
Revised November 2015



* WEIR SIZING
L = [(Q100*1.6) / (3.21*H^1.5)]–2.4*H
L = [(0.24CFS*1.6) / (3.21*1'^1.5)]–2.4*1'
L = –2.33' < 6 MIN WIDTH REQ'D USE 6'
Q100 FROM MODEL = 0.24 CFS

NOT TO SCALE

Figure II–4.2.17
Sediment Trap Outlet
Revised November 2015

ULTRATECH INTERNATIONAL, INC. | Ultra-Drain Guards® Specifications

Material Specifications

Properties	ASTM Test	Value
Material: Non-woven, Polypropylene Geotextile		
Grab Tensile	D 4632	205 lbs
Elongation	D 4632	50%
Trapezoid Tear	D 4533	80 lbs
Puncture	D 4833	525 lbs
CBR Puncture	D 6241	600 lbs
Mullen Burst	D 3786	420 psi
Permittivity	D 4491	1.5 sec^{-1}
A.O.S. (U.S. sieve no.) / Microns	D 4751	80 / 180
UV Stability (strength retained %) 500 hrs	D 4355	70%
Fabric Weight (oz/yd2) (typical)	D 5261	8 oz/yd^2
Flow (through material)	D 4491	90 gpm/ft^2
Flow (bypass ports gpm) *		770 gpm
Flow (bypass ports cfs) *		1.7 cfs

* Larger bypass flow rate designs are available

Unit Specifications

Model	Oil Capture (Gal)	Sediment Capture (lbs)	Collection Area (dia.x depth)	Flow Rate (gpm)	Dimensions
Oil & Sediment² Part # 9217	.87	40	10" x 18"	500	48" x 36" x 18"
Oil & Sediment² Part # 9356	1.55	40	10" x 18"	900	60" x 60" x 18"
Oil & Sediment Plus² Part # 9219	1.38	40	10" x 18"	500	48" x 36" x 18"
Oil & Sediment Plus² Part # 9358	2.06	40	10" x 18"	900	60" x 60" x 18"
Trash & Debris Part # 9227	----	40	10" x 18"	500	48" x 36" x 18"
Ultimate² Part # 9376	1.57	40	10" x 18"	500	48" x 36" x 38"
High Capacity Part # 9393	1.9	300	24" x 24"	1000	60" x 60" x 24"
Adjustable Frame Model Part# 8930	1.26	40	10" x 18"	500	Varies

UltraTech International, Inc. · 11542 Davis Creek Court, Jacksonville, Florida 32256 USA
(800) 353-1611 · 1-904-292-1611 · stormwaterproducts.com

TABLE 2.1

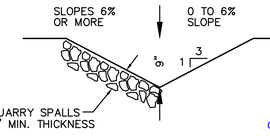
TEMPORARY EROSION CONTROL SEED MIX

	% WEIGHT	% PURITY	% GERMINATION
CHEWINGS OR ANNUAL BLUE GRASS FESTUCA RUBRA VAR. COMMUTATA OR POA ANNA	40	98	90
PERRENIAL RYE LOLIUM PERENNE	50	98	90
REDTOP OR COLONIAL BENTGRASS AGROSTIS ALBA OR AGROSTIS TENIUS	5	92	85
WHITE DUTCH CLOVER TRIFOLIUM REPENS	5	98	90

TABLE 2.2

LANDSCAPING SEED MIX

	% WEIGHT	% PURITY	% GERMINATION
PERENNIAL RYE BLEND LOLIUM PERENNE	70	98	90
CHEWINGS AND RED FESCUE BLEND FESTUCA RUBRA VAR. COMMUTATA OR FESTUCA RUBRA	30	98	90



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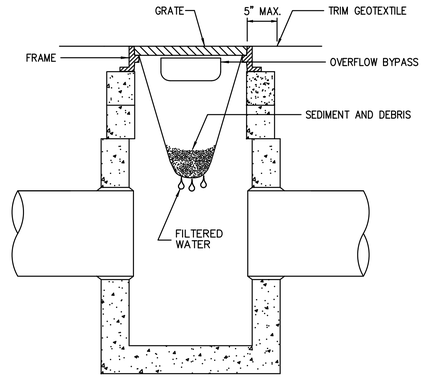
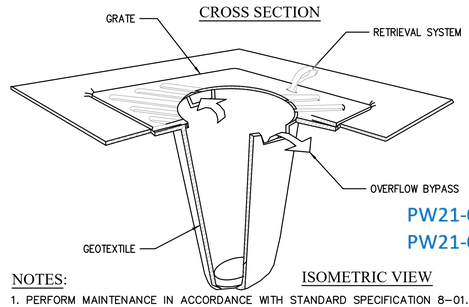


CROSS SECTION



ISOMETRIC VIEW

PW21-002
PW21-003

NOTES:

1. PERFORM MAINTENANCE IN ACCORDANCE WITH STANDARD SPECIFICATION 8–01.3(15).
2. SIZE THE "BELOW GRATE INLET DEVICE" (BGID) FOR THE STORM WATER STRUCTURE IT WILL SERVICE.
3. THE BGID SHALL HAVE A BUILT–IN HIGH–FLOW RELIEF SYSTEM (OVERFLOW BYPASS).
4. THE RETRIEVAL SYSTEM MUST ALLOW REMOVAL OF THE BGID WITHOUT SPILLING THE COLLECTED MATERIAL.

STORM DRAIN INLET PROTECTION DETAIL

NOT TO SCALE

DESIGN MAK
DRAWN JKA
CHECKED MAK
SEC 25 T 24N R 1E
DISC NO DATE 12/01/2020
SCALE 1" = 20'

REV NO	REVISION DESCRIPTION	DATE	BY

1/12/2021

PROJECT MANAGER JASON K ANDERSON, EIT
SIGNATURE:

TEAM 4 ENGINEERING
5809 NE MINDER RD
POULSBO, WA 98370
(360) 297-5560
(360) 297-7951 (FAX)

TITLE PLISKO LN MULTI FAMILY
TESC DETAILS

CLIENT DISNEY & ASSOCIATES
BOB DISNEY
5706 BETHEL RD, STE 100
PORT ORCHARD, WA 98367
(360) 895–7747

SHEET 6 OF 21

FILE NO 483D

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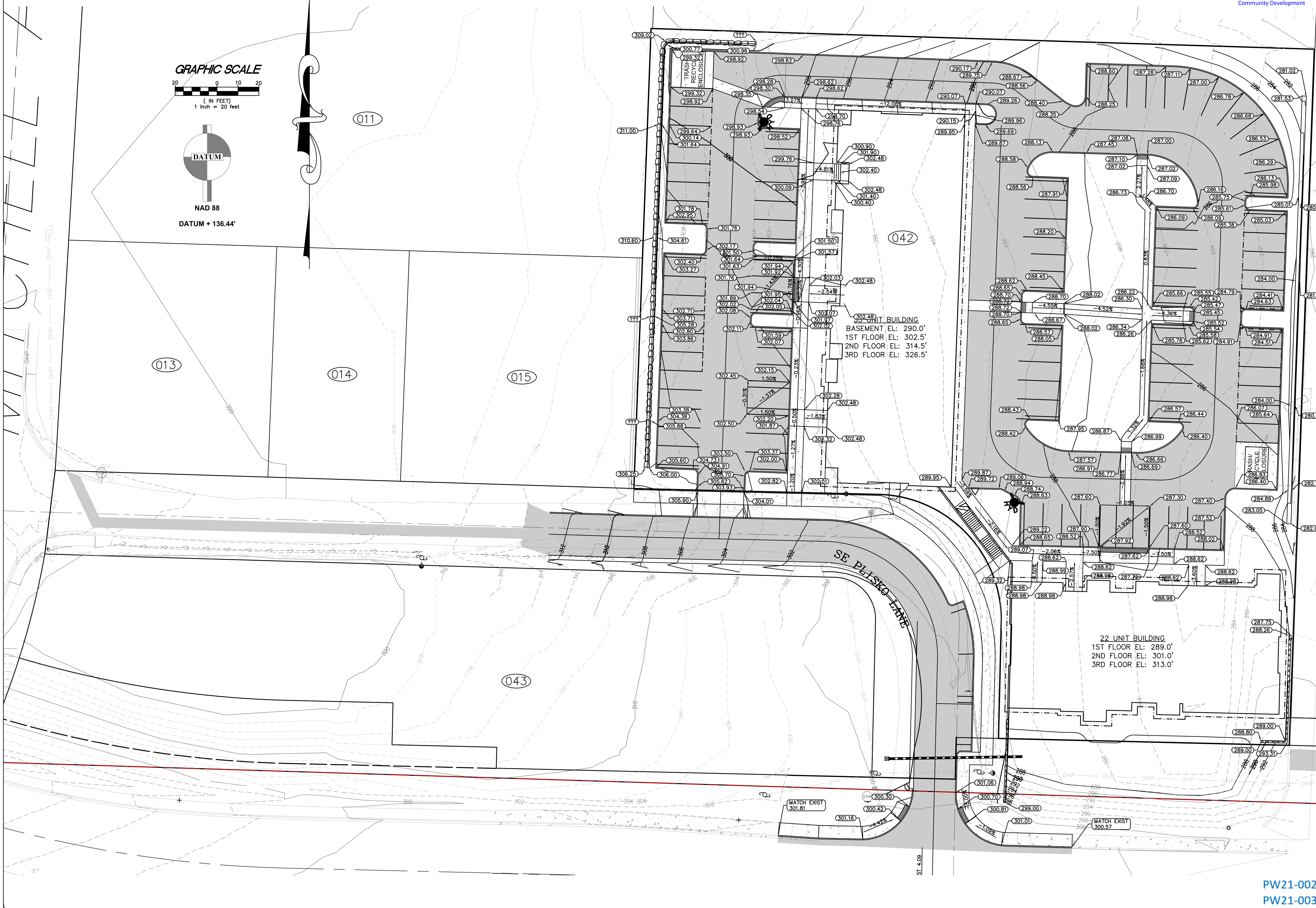
PLISKO LN MULTI FAMILY

GRADING PLAN



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CHECKED	MAK
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REV NO	REVISION DESCRIPTION	DATE	BY

1/12/2021

TITLE: PLISKO LN MULTI FAMILY
GRADING PLAN

CLIENT: DISNEY & ASSOCIATES
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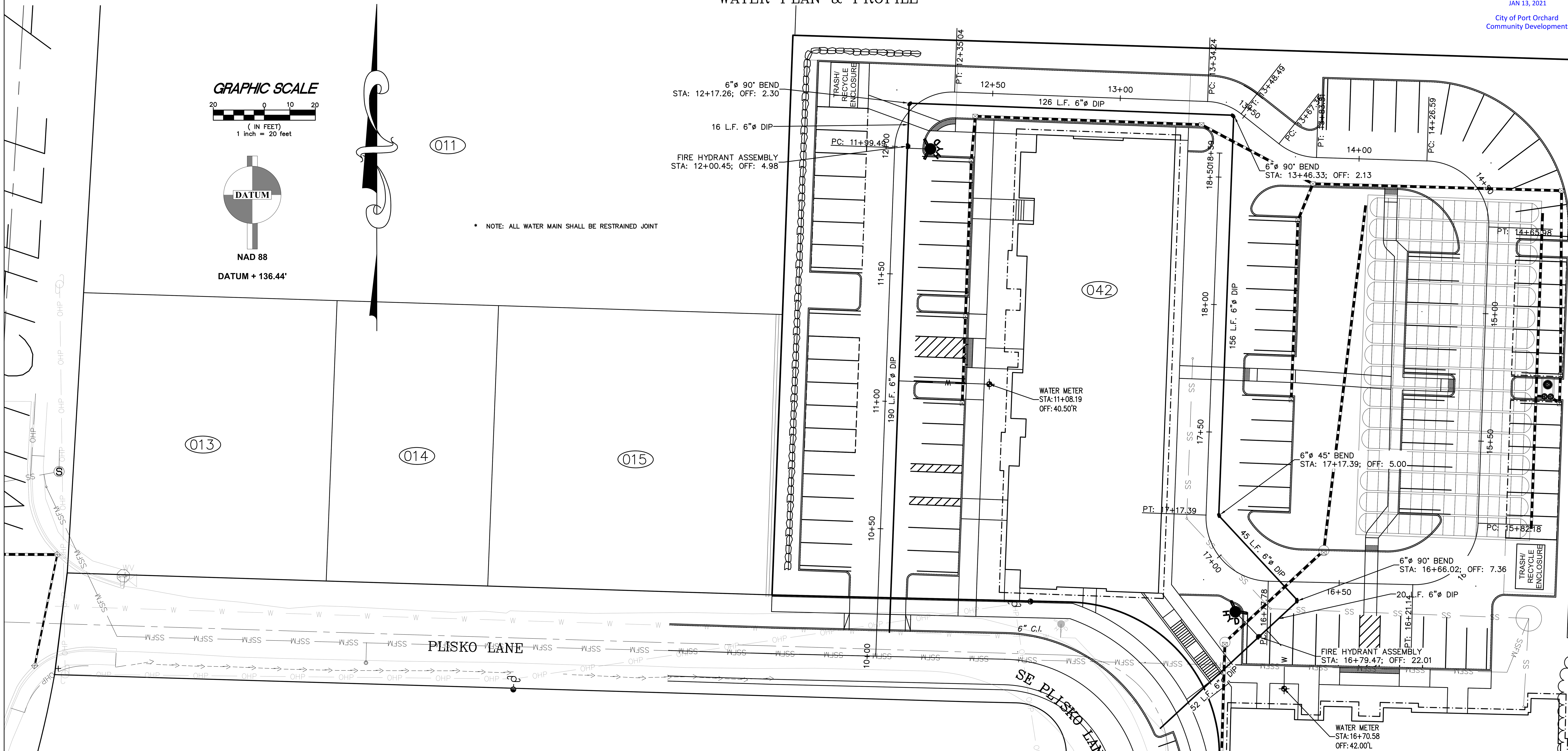
SHEET 7 OF 21

FILE NO 483D

PW21-002
PW21-003

PLISKO LN MULTI FAMILY

WATER PLAN & PROFILE



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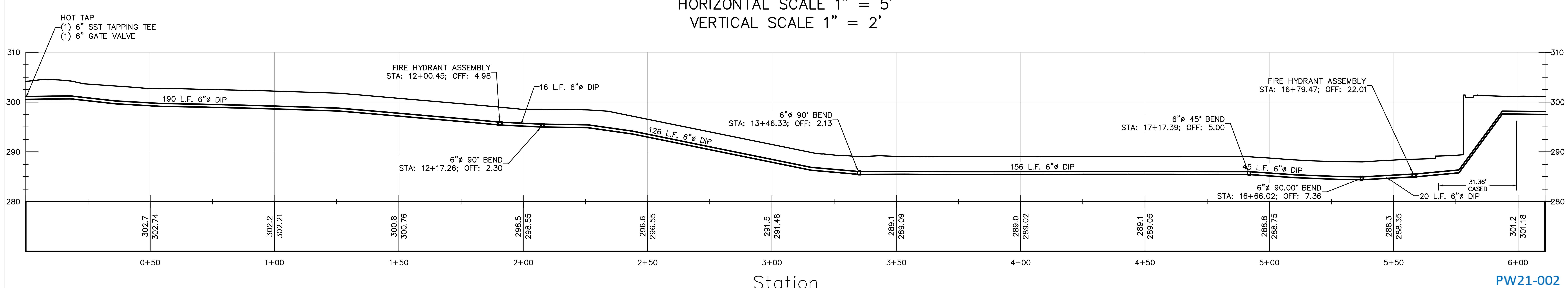
VERTICAL SCALE 1" = 2'



PW21-002
PW21-003

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REV NO	REVISION DESCRIPTION	DATE	BY

1/12/2021

TITLE PLISKO LN MULTI FAMILY
WATER PLAN & PROFILE

CLIENT DISNEY & ASSOCIATES
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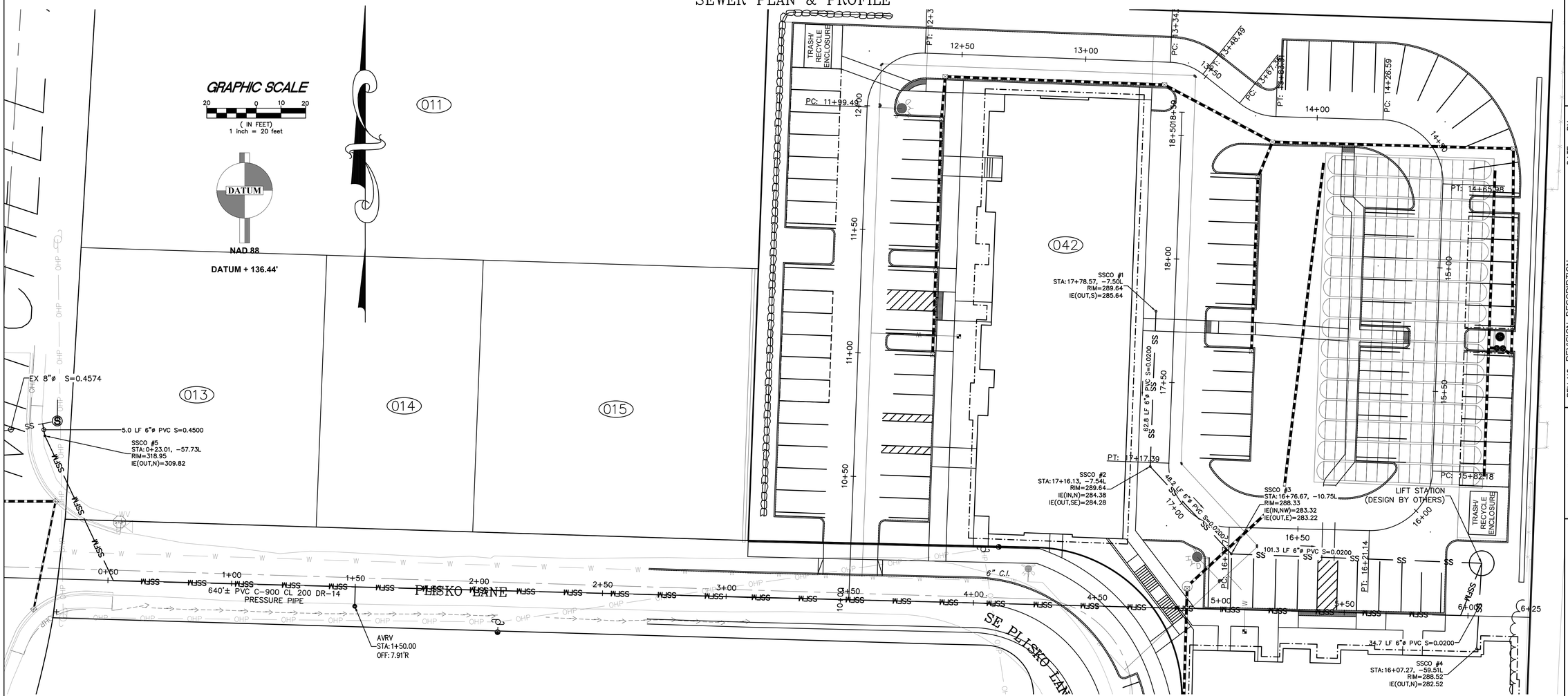
SHEET 8 OF 21
FILE NO 483D

PLISKO LN MULTI FAMILY

SEWER PLAN & PROFILE



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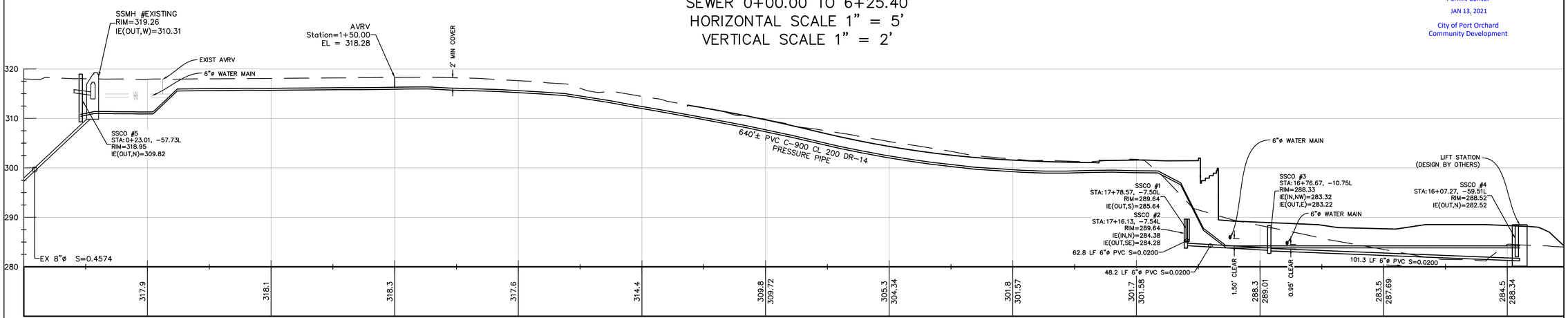

COUNTER COMPLETE
Permit Center
JAN 13, 2021
City of Port Orchard
Community Development

PW21-002
PW21-003

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DISC NO	DATE 12/01/2020
SCALE	1" = 40'

REV NO	REVISION DESCRIPTION	DATE	BY

SIGNATURE:

1/12/2021

TITLE PLISKO LN MULTI FAMILY
SEWER PLAN & PROFILE

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SHEET 9 OF 21

FILE NO 483D

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PLISKO LN MULTI FAMILY

STORM PLAN & PROFILE

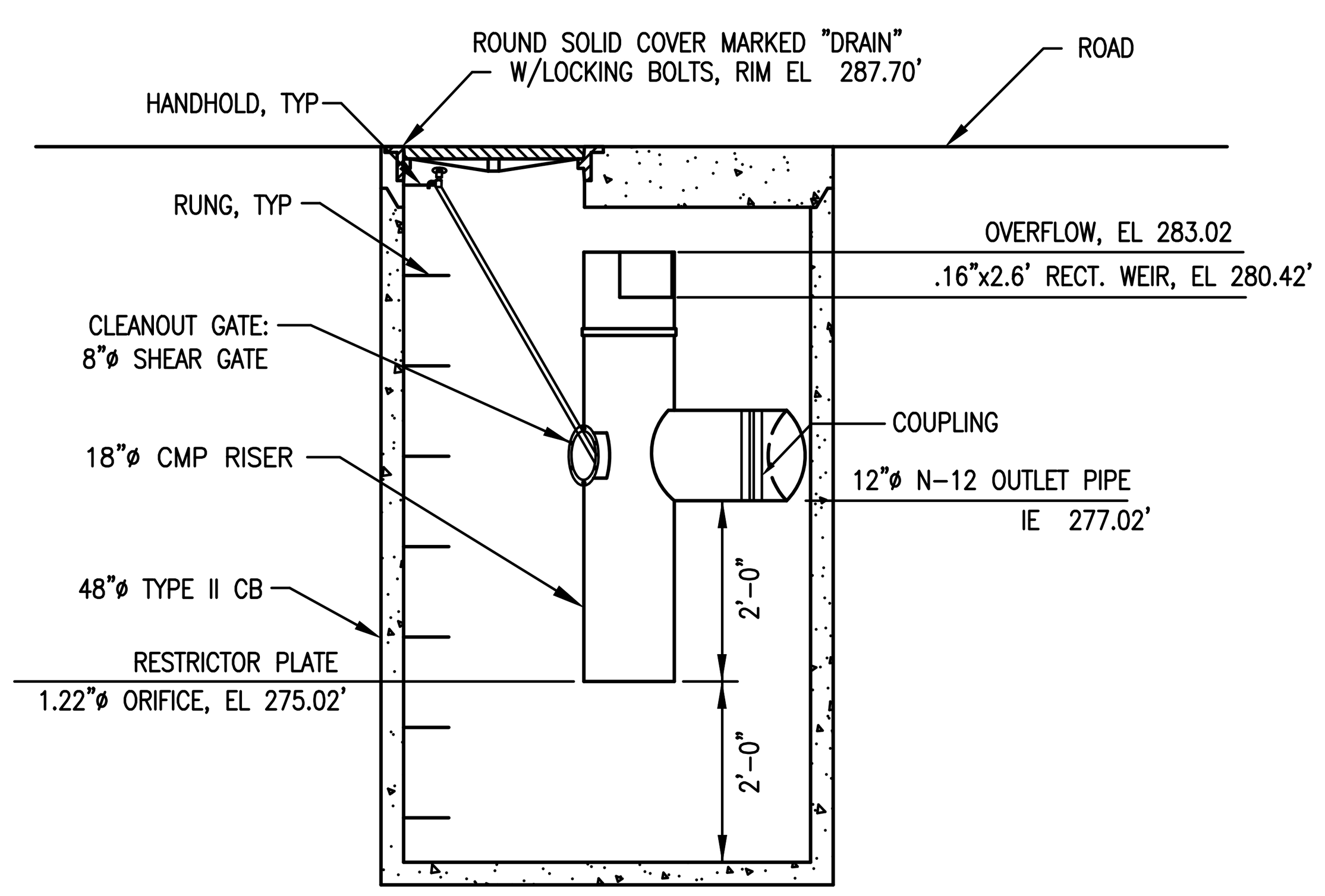
GRAPHIC SCALE

(IN FEET)
1 inch = 20 feet

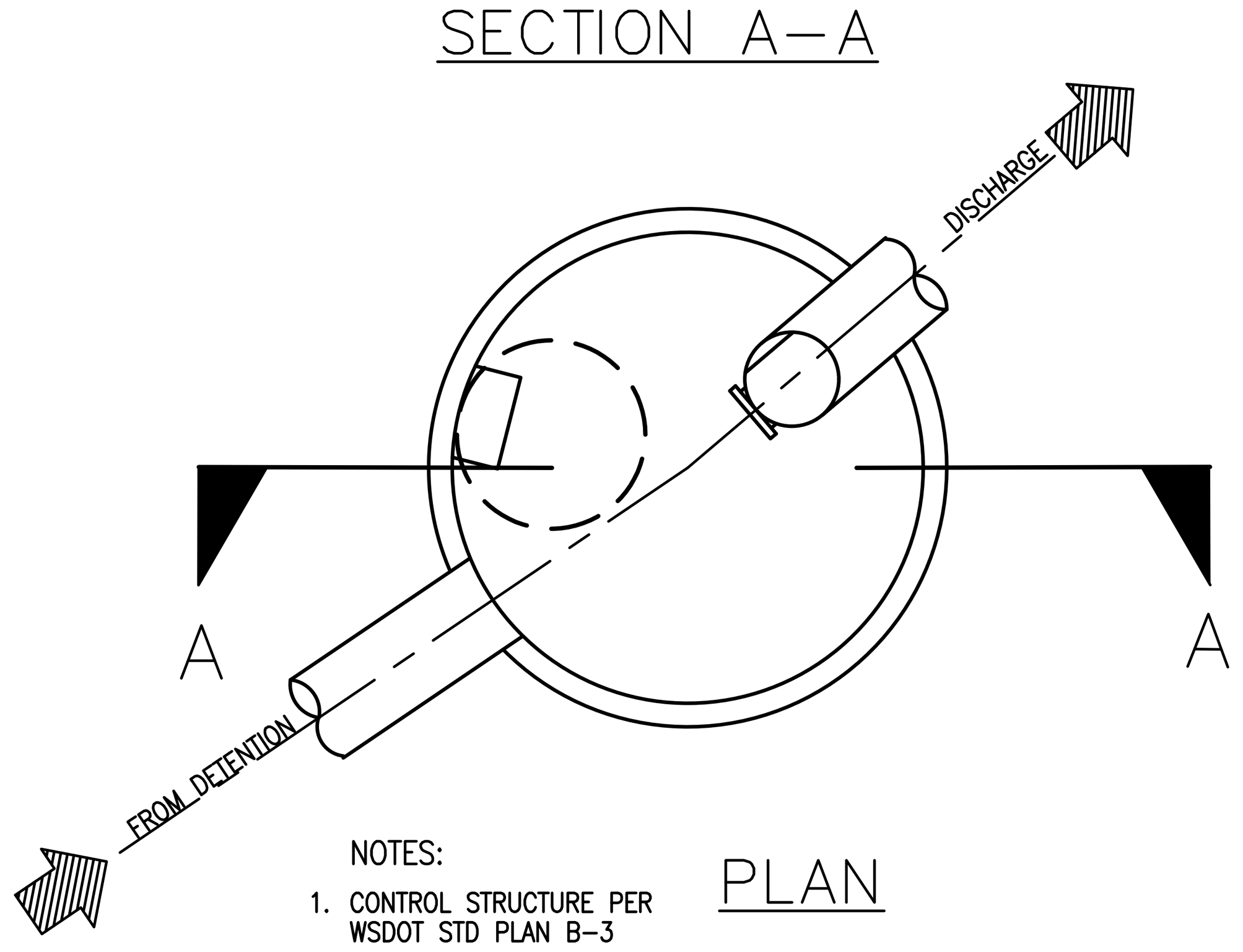
DATUM

NAD 88

DATUM + 136.44'



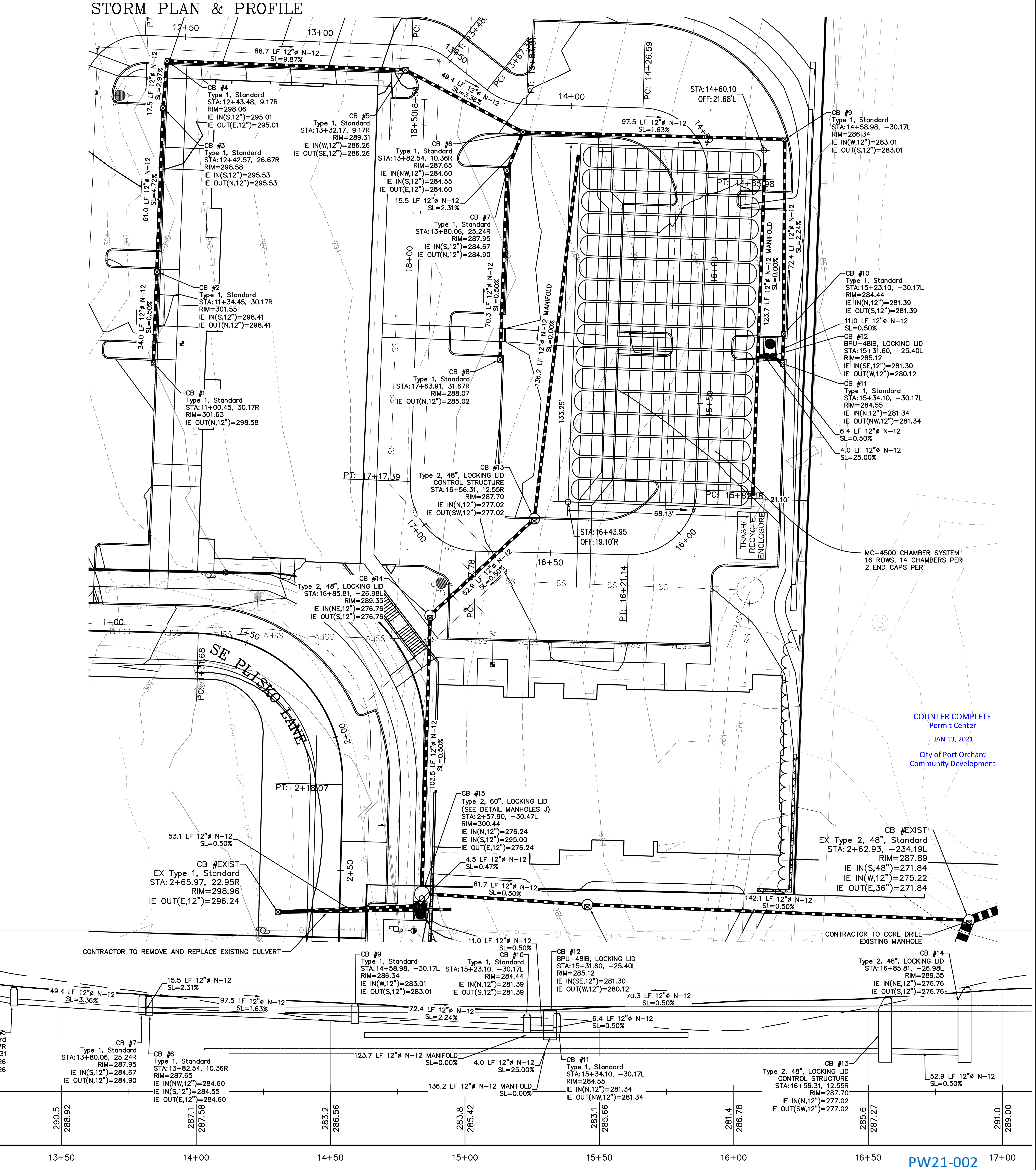
SECTION A-A



NOTES:
1. CONTROL STRUCTURE PER WSDOT STD PLAN B-3

PLAN

CONTROL STRUCTURE CB #13



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Permit Center
JAN 13, 2021
City of Port Orchard
Community Development

PW21-002
PW21-003

DESIGN	MAK
DRAWN	JKA
CHECKED	MAK
SEC 25 T 24N R 1E	
DISC NO	DATE 12/01/2020
SCALE	AS NOTED

REV NO | REVISION DESCRIPTION | DATE | BY

MARK A. KUHLMAN — STATE OF WASHINGTON — 18648 — REGISTERED PROFESSIONAL ENGINEER
1/12/2021

SIGNATURE:

TITLE PLISKO LN MULTI FAMILY
STORM PLAN & PROFILE

CLIENT DISNEY & ASSOCIATES
BOB DISNEY
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PORT ORCHARD, WA 98367
(360) 895-7747

PROJECT MANAGEMENT • CONSULTING • PLANNING • ENGINEERING
TEAM 4

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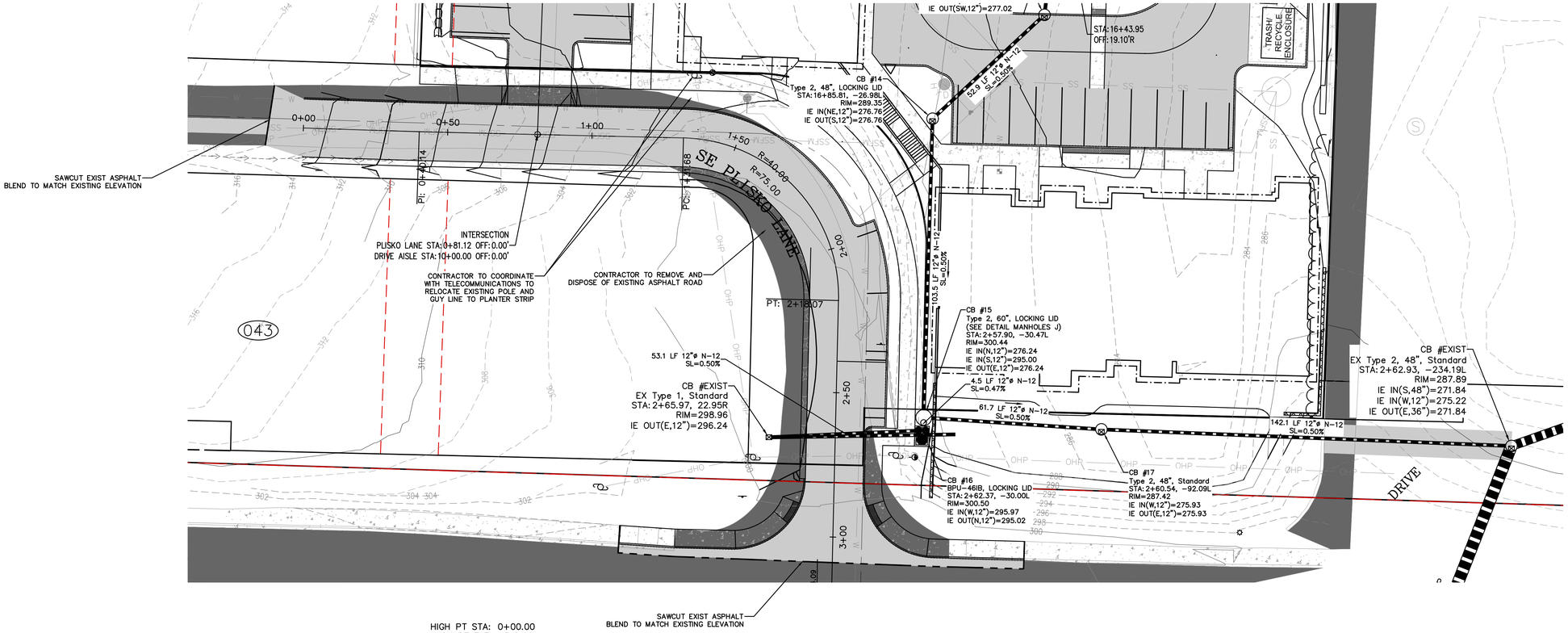
(360) 297-7951 (FAX)

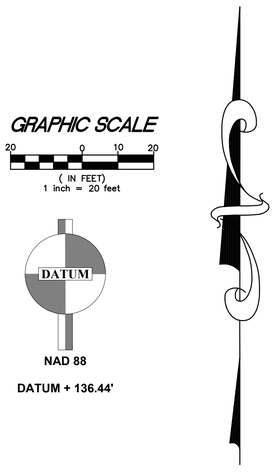
SHEET 10 OF 21

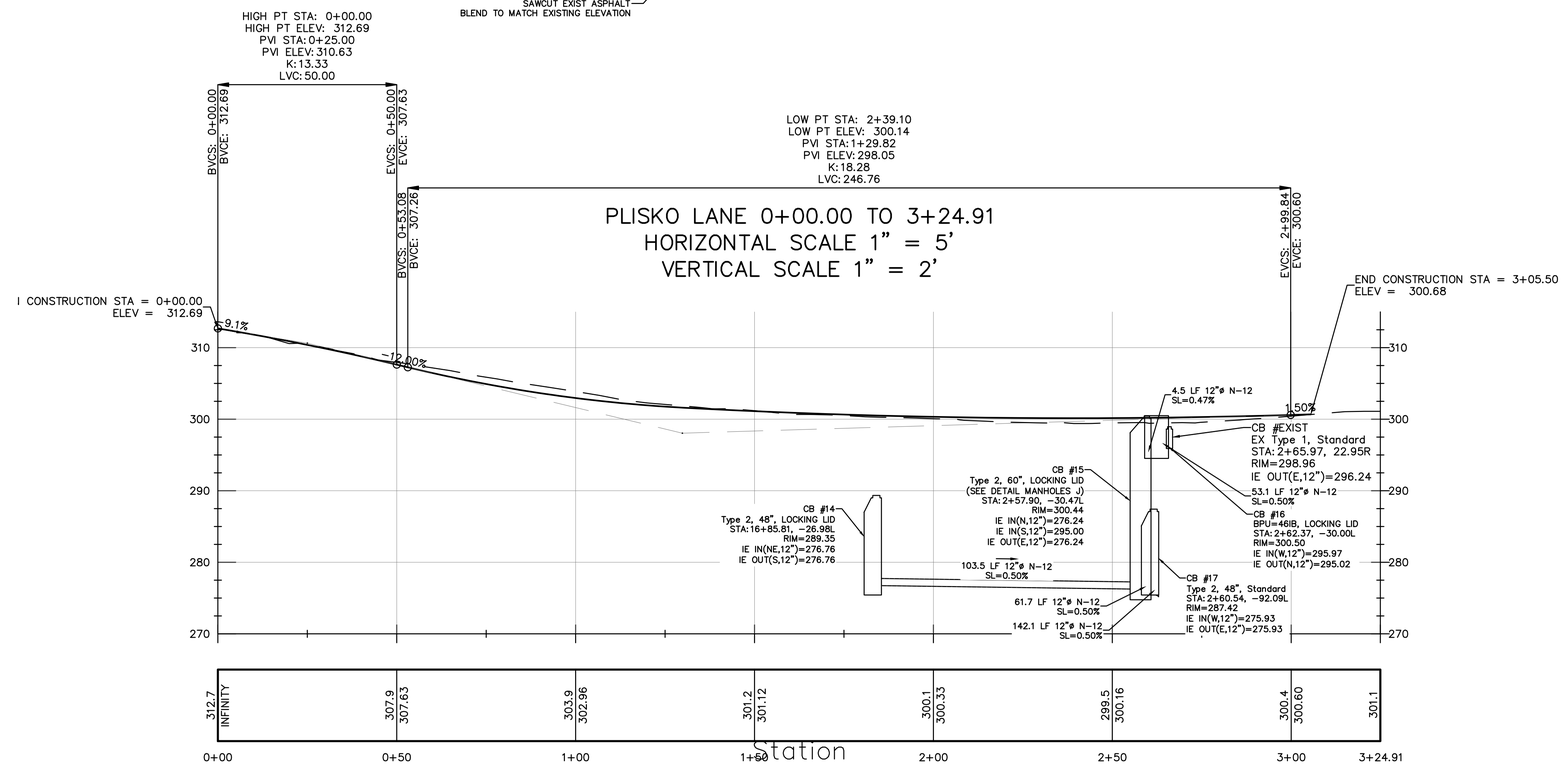
FILE NO 483D

PLISKO LN MULTI FAMILY

PLISKO LANE IMPROVEMENTS







COUNTER COMPLETE
Permit Center
JAN 13, 2021
City of Port Orchard
Community Development

PW21-002
PW21-003

REV NO	REVISION DESCRIPTION	DATE	BY

DESIGN MAK
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SEC 25 T 24N R 1E
DISC NO DATE12/01/2020
SCALE AS NOTED

1/12/2021

TITLE PLISKO LN MULTI FAMILY
PLISKO LANE IMPROVEMENTS

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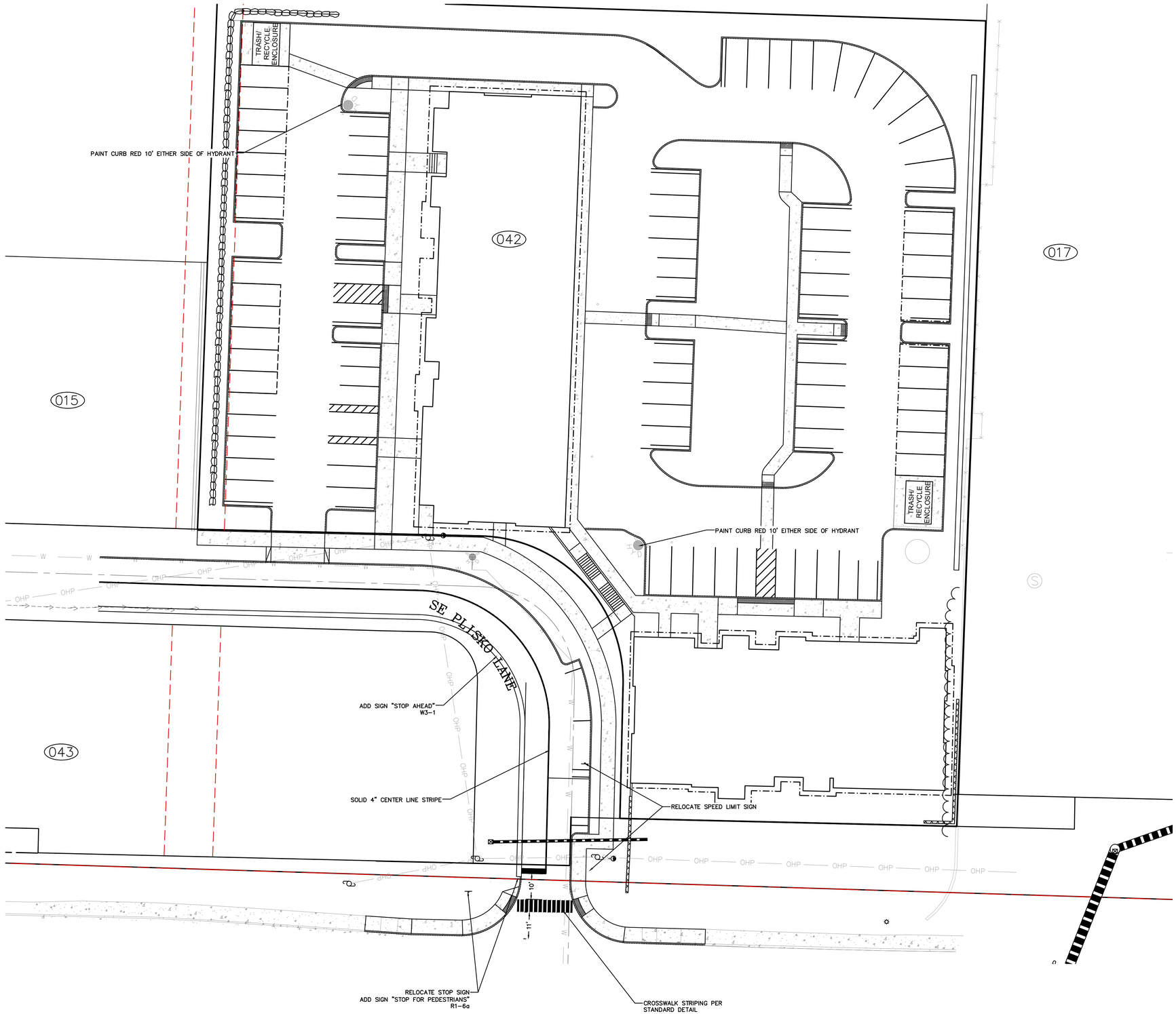
SHEET 11 OF 21

FILE NO 483D

PLISKO LN MULTI FAMILY

STRIPING AND SIGNAGE PLAN

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 feet



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Permit Center
JAN 13, 2021
City of Port Orchard
Community Development

PW21-002
PW21-003

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DISC NO	DATE 12/01/2020
SCALE	AS NOTED

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1/12/2021

SIGNATURE:

PROJECT MANAGER: JASON K. ANDERSON, EIT

TITLE PLISKO LN MULTI FAMILY
STRIPING AND SIGNAGE PLAN

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SHEET 12 OF 21

FILE NO 483D

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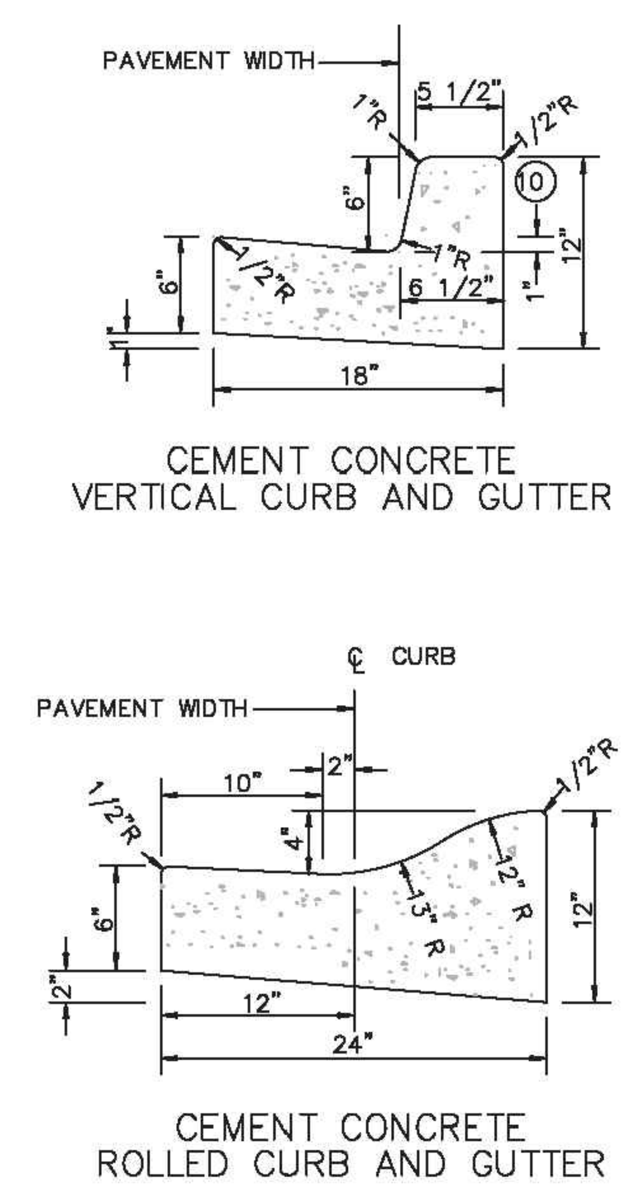
PLISKO LN MULTI FAMILY

DETAILS

CURB AND GUTTER A

NOTES:

1. CONSTRUCTION OF CURB DETAILS SHALL BE IN ACCORDANCE WITH THE CURRENTLY ADOPTED STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS PUBLISHED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND THE AMERICAN PUBLIC WORKS ASSOCIATION. (WSDOT/APWA SPECIFICATIONS) UNLESS OTHERWISE MODIFIED BELOW.
2. ALL CONCRETE SHALL BE COMMERCIAL CLASS PER WSDOT/APWA SPECIFICATIONS.
3. FORMS SHALL BE TRUE TO LINE AND GRADE AND SECURELY STAKED. STEEL FORMS ONLY SHALL BE USED ON TANGENT SECTIONS. WOOD FORMS MAY BE USED ON CURVED SECTIONS.
4. FULL DEPTH EXPANSION JOINTS CONSISTING OF 3/8 INCH MINIMUM PREMOLDED JOINT MATERIAL SHALL BE PLACED ADJACENT TO CATCH BASINS, INLETS AND AT POINTS OF TANGENCY ON STREETS AND DRIVEWAY RETURNS. MAXIMUM SPACING SHALL BE 20 FEET.
5. CONTRACTION JOINTS (DUMMY JOINTS) CONSISTING OF 3/8" MIN. X 2" OF PREMOLDED JOINT MATERIAL SHALL BE CONSTRUCTED AT INTERVALS OF 10 FEET.
6. ALL JOINTS SHALL BE CLEAN AND EDGED.
7. FINISH SHALL BE A LIGHT BROOM FINISH.
8. FINISHED CURBS AND GUTTERS SHALL BE SPRAYED WITH A CLEAR CURING COMPOUND.
9. SUBGRADE COMPACTION FOR CURBS AND GUTTERS SHALL MEET A MINIMUM 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH SEC. 2-03.3(14) OF THE WSDOT/APWA SPECIFICATIONS.



CEMENT CONCRETE VERTICAL CURB AND GUTTER

CEMENT CONCRETE ROLLED CURB AND GUTTER

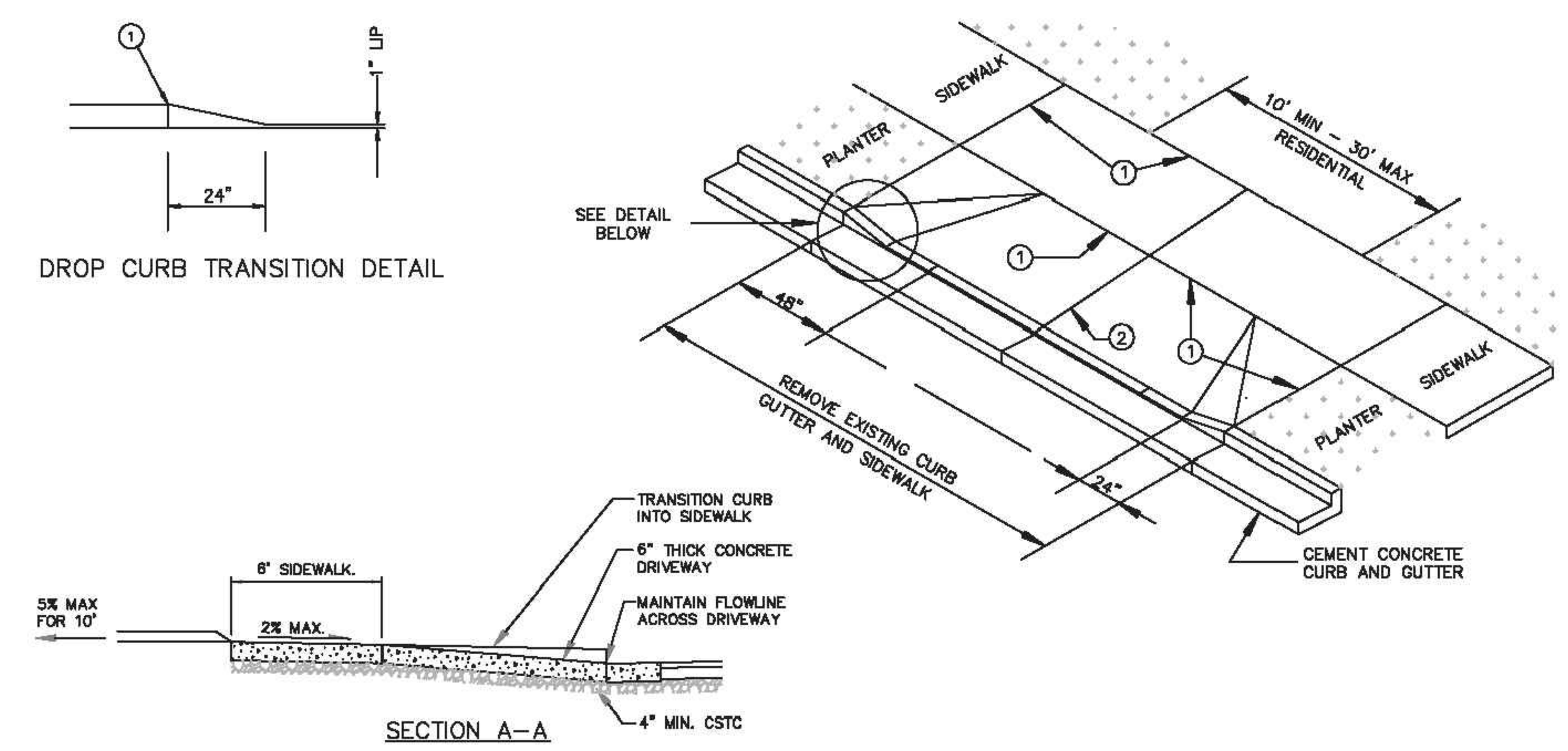
Port ORCHARD Est. 1890

CURB AND GUTTER A

CEMENT CONCRETE CURB AND GUTTER

DRAWN BY	IDS
DATE	1/29/2019
SCALE	NTS
DRAWING NUMBER	300

DRIVEWAYS B



DROP CURB TRANSITION DETAIL

SECTION A–A

NOTES:

1. FULL DEPTH EXPANSION JOINT, 3/8" MINIMUM THICKNESS.
2. FULL DEPTH EXPANSION JOINT, 3/8" MINIMUM THICKNESS IF WIDTH OF DRIVEWAY IS 15 FEET OR GREATER.
3. DRIVEWAY SECTION WITHIN PUBLIC RIGHT-OF-WAY IS TO BE SURFACED WITH ASPHALT OR CONCRETE.
4. DRIVEWAY CEMENT CONCRETE DEPTH SHALL BE A MINIMUM OF 6" AND PLACED ON COMPACTED GRADE.
5. CONCRETE SHALL BE COMMERCIAL CLASS CONCRETE PER WSDOT/APWA SPECIFICATIONS.
6. CLEAN AND EDGE ALL JOINTS.

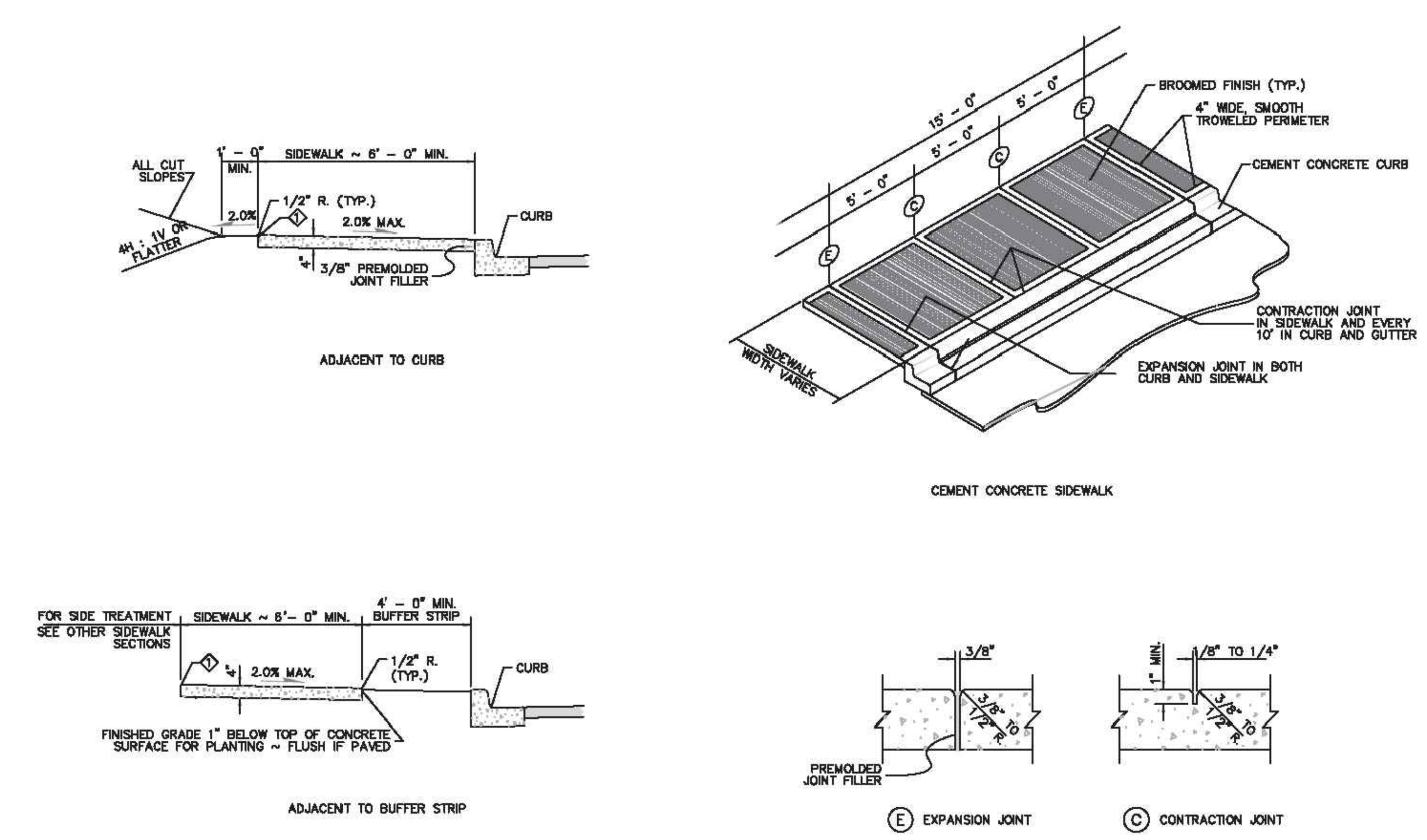
Port ORCHARD Est. 1890

DRIVEWAYS B

RESIDENTIAL DRIVEWAY

DRAWN BY	IDS
DATE	1/01/2019
SCALE	NTS
DRAWING NUMBER	321

SIDEWALK A



ADJACENT TO CURB

CEMENT CONCRETE SIDEWALK

ADJACENT TO BUFFER STRIP

Ⓔ EXPANSION JOINT

Ⓒ CONTRACTION JOINT

Port ORCHARD Est. 1890

SIDEWALK A

CEMENT CONCRETE SIDEWALK

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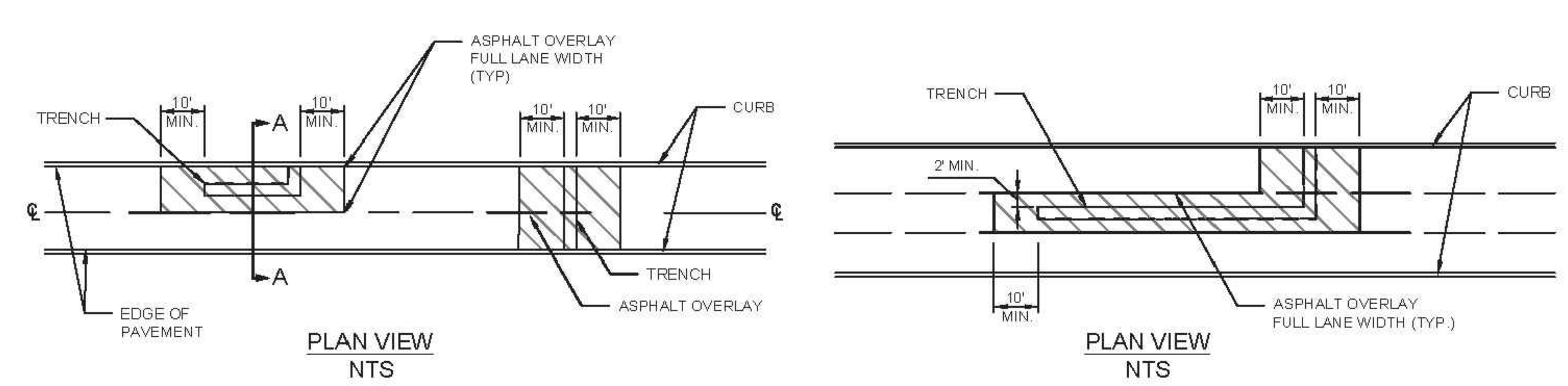
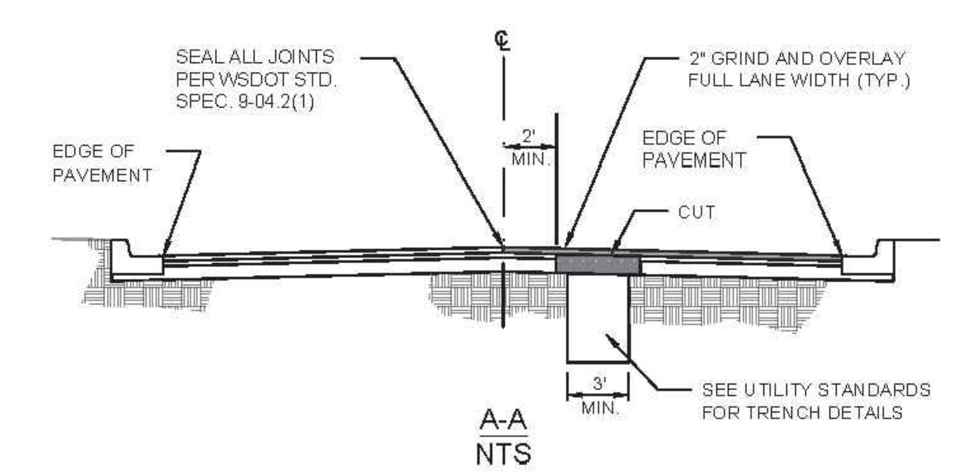
DATE	1/01/2019
SCALE	NTS
DRAWING NUMBER	340

TYPICAL STREET RESTORATION



PLAN VIEW
NTS

PLAN VIEW
NTS



A-A
NTS

NOTES:

1. THIS STANDARD APPLIES TO ALL CUTS IN ASPHALT ROADWAY.
2. GRIND/OVERLAY WITHIN SIGNAL LOOP DETECTION ZONE MAY BE EXTENDED TO INCLUDE ADDITIONAL LANES AND/OR DETECTORS
3. OVERLAY AREA MAY BE EXTENDED AT THE DISCRETION OF THE TRANSPORTATION ENGINEER TO ENCOMPASS ADJACENT STREET CUTS OR PREVIOUS RESTORATIONS.
4. ADJUST ALL UTILITY CASTINGS TO FINISHED GRADE AFTER OVERLAY AND RESTORE CHANNELIZATION AND LOOP DETECTION

Port ORCHARD Est. 1890

TYPICAL STREET RESTORATION

ASPHALT OVERLAY FOR ROADWAY TRENCH RESTORATION

DRAWN BY	IDS
DATE	1/24/2019
SCALE	NTS
DRAWING NUMBER	404

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DISC NO	DATE 12/01/2020
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MARK A. KUHLMAN, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER 18646 — 1/12/2021

SIGNATURE:

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PROJECT MANAGEMENT • CONSULTING • PLANNING • ENGINEERING — TEAM 4

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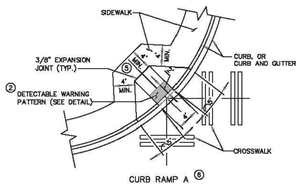
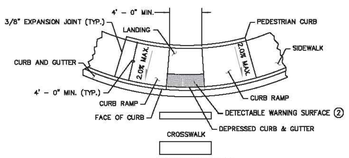
FILE NO 483D

PLISKO LN MULTI FAMILY

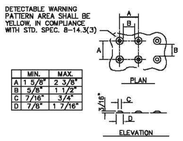
DETAILS



CURB RAMP A ⑥



CURB RAMP B ⑥



MIN.	MAX.
A 1 5/8"	2 3/8"
B 9/8"	1 1/2"
C 7/16"	3/4"
D 7/8"	1 7/16"

DETECTABLE WARNING PATTERN DETAIL

NOTES

1. PLACEMENT OF GRATINGS, ACCESS COVERS AND OTHER APPURTENANCES SHALL NOT BE LOCATED ON CURB RAMPS, LANDINGS AND GUTTERS WITHIN THE PEDESTRIAN ACCESS ROUTE.
2. RAMPS SHALL BE TEXTURED USING TRUNCATED DOME PATTERN (SEE DETAIL THIS PAGE). DETECTABLE WARNING PATTERN SHALL BE YELLOW IN COMPLIANCE WITH WSDOT STANDARD SPECIFICATION 8-14.3(3)
3. RAMP CENTER LINE SHALL BE PERPENDICULAR TO OR RADIAL TO CURB RETURNS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
4. RAMPS SHALL BE CONSTRUCTED AT CORRESPONDING SIDEWALK LOCATIONS ON OPPOSITE SIDE OF STREETS WHEN RAMPS ARE CONSTRUCTED ON ONE SIDE OF STREET.

⑤ LANDING SHALL BE MINIMUM 4 X 4'.

⑥ CURB RAMP A MUST BE INSTALLED UNLESS OTHERWISE APPROVED.

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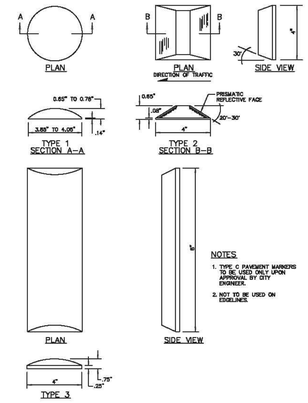
Port ORCHARD Est. 1890	SIDEWALKS B
	ADA CURB RAMP

DRAWN BY	IDS
DATE	1/29/2019
SCALE	NTS
DRAWING NUMBER	341



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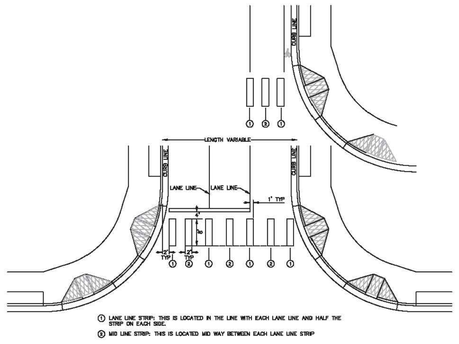
Port ORCHARD Est. 1890	MARKINGS A
	LANE MARKERS

DRAWN BY	IDS
DATE	1/29/2019
SCALE	NTS
DRAWING NUMBER	420



NOTES

DURA STRIPE MATERIALS SHALL BE USED UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

ALL NEW MID BLOCK CROSSWALKS SHALL BE LAYED OUT AS ABOVE AND PROVIDE SUPPLEMENTAL SIGNING CONSISTENT WITH M.U.T.C.D. AND AS DIRECTED BY THE CITY ENGINEER.

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Port ORCHARD Est. 1890	MARKINGS H
	TYPICAL CROSSWALK STRIPING

DRAWN BY	IDS
DATE	1/30/2019
SCALE	NTS
DRAWING NUMBER	427

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JAN 13, 2021

City of Port Orchard
Community Development

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DISC NO DATE 12/01/2020
SCALE AS NOTED

REV NO	REVISION DESCRIPTION	DATE	BY

KJELLMAN A. ANDERSON 18848 REGISTERED PROFESSIONAL ENGINEER STATE OF WASHINGTON

1/12/2021

PROJECT MANAGER: JASON K. ANDERSON, EIT

SIGNATURE:

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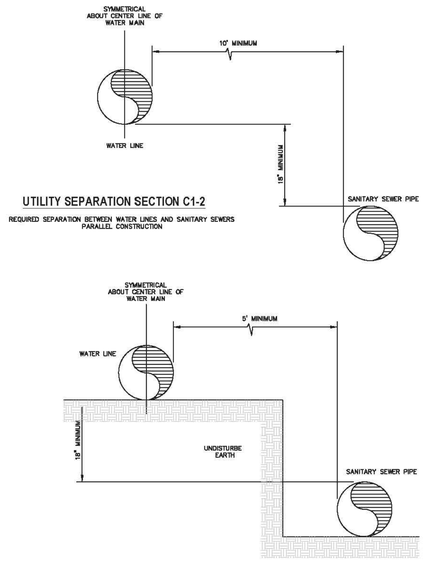
SHEET 14 OF 21

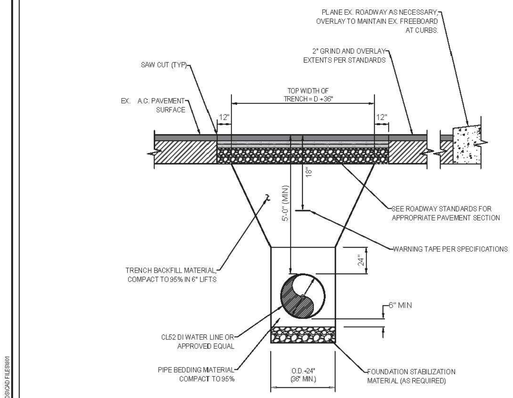
FILE NO 483D

PLISKO LN MULTI FAMILY

DETAILS

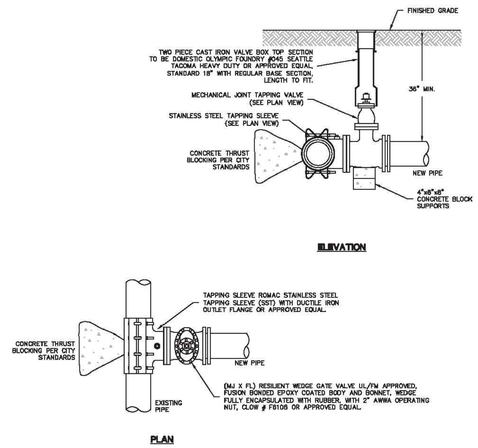


Port ORCHARD Est. 1890	RESTORATION, TAPS, AND BLOCKING A SEPARATION STANDARDS	DRAWN BY	IDS
		DATE	1/10/2013
		SCALE	NTS
		DRAWING NUMBER	800-B



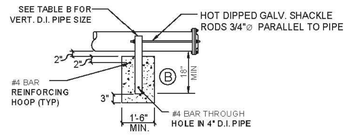
NOTES:
1) BED THE ENTIRE WIDTH OF THE TRENCH PAVEMENT
2) RESTORATION SHALL BE PER THE APPROPRIATE SECTION IN CHAPTER 6 (PAVEMENT SURFACING).
3) INSTALL TRACER WIRE PER SPECIFICATIONS

Port ORCHARD Est. 1890	RESTORATION, TAPS, AND BLOCKING B WATER MAIN TRENCH	DRAWN BY	IDS
		DATE	1/01/2013
		SCALE	NTS
		DRAWING NUMBER	801



NOTES:
1. PRIOR TO BORING:
   A. TAPPING SLEEVE AND VALVE SHALL BE PRESSURE TESTED AT 200 PSI FOR A PERIOD OF 15 MINUTES. PRESSURE LOSS DURING TESTING SHALL NOT EXCEED 5 PSI.
   B. TAPPING SLEEVE AND VALVE SHALL BE STERILIZED PER SPECIFICATIONS
2. PRIOR TO FINAL CONNECTION OF TAPPING VALVE TO NEW PIPING, THE NEW PIPING SHALL BE PRESSURE TESTED AND STERILIZED PER SPECIFICATIONS

Port ORCHARD Est. 1890	RESTORATION, TAPS, AND BLOCKING C WET TAP	DRAWN BY	IDS
		DATE	1/01/2013
		SCALE	NTS
		DRAWING NUMBER	802



TIE BACK BLOCK DETAIL

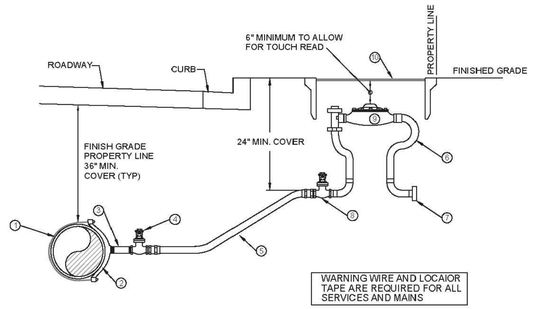
TABLE B - TIE BACK

WATER MAIN PIPE	AMOUNT OF 3/4" GALV. SHACKLE RODS	SIZE OF VERT. PIPE IN CONC.	AMOUNT OF #4 REINFORCING BAR HOOPS
4"	2	4"	1
6"	2	4"	1
8"	2	4"	1
12"	4	4"	2
16"	6	6"	3
18"	6	6"	3
24"	6	6"	3

NOTES:

1. BEARING AREA OF CONCRETE THRUST BLOCK IS BASED ON 225 PSI PRESSURE AND SAFE SOIL BEARING LOAD OF 2000 PSF.
2. THE SAFE SOIL BEARING LOAD SHALL BE ADJUSTED TO MEASURED SOIL BEARING LOADS IN THE FIELD.
3. AREAS MUST BE ADJUSTED FOR OTHER PIPE SIZES, PRESSURES AND SOIL CONDITIONS.
4. CONCRETE BLOCKING SHALL BE CAST IN PLACE AND HAVE A MINIMUM OF 1/4 SQUARE FOOT BEARING AGAINST THE FITTING.
5. THE BLOCK SHALL BEAR AGAINST THE FITTINGS ONLY AND SHALL BE CLEAR OF JOINTS TO PERMIT TAKING UP AND DISMANTLING OF JOINT
6. THE CONTRACTOR SHALL INSTALL BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATING PRESSURE UNDER ALL CONDITIONS OF SERVICE.
7. USE 2" THICK STYROFOAM TO FORM THE CONCRETE BLOCKING. PLASTIC SHALL BE INSTALLED BETWEEN ALL CONCRETE BLOCKING AND FITTINGS.

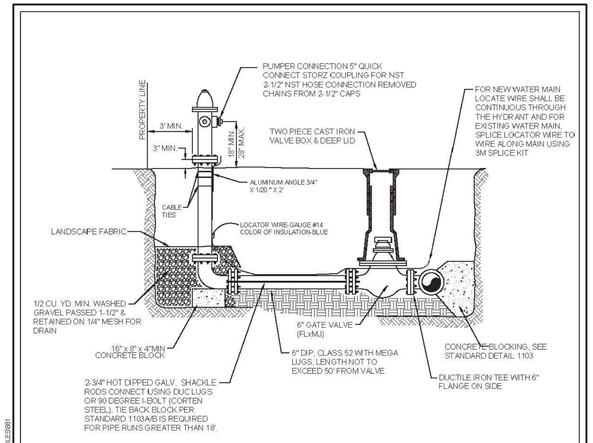
Port ORCHARD Est. 1890	RESTORATION, TAPS, AND BLOCKING THRUST BLOCKING AND TIE BACKS	DRAWN BY	IDS
		DATE	1/15/2019
		SCALE	NTS
		DRAWING NUMBER	803-B



NOTES:

1. EXISTING WATER MAIN
2. 1" (IP THREAD) SINGLE STRAP SADDLE ROMAC STYLE 101S OR APPROVED EQUAL
3. 1" BRASS NIPPLE, 3" LONG
4. CORP. STOP, FORD FB1100 OR APPROVED EQUAL
5. 1" POLYETHYLENE PIPE, MAINTAIN 36" COVER FROM WATER MAIN TO WITHIN 48" OF METER BOX
6. 1" METER SETTER MUELLER 1434 OR APPROVED EQUAL HORIZONTAL IN, HORIZONTAL OUT. M.I.P. THREAD ENDS.
7. SCHEDULE 40 1" PVC THREADED PLUG. REMOVED WHEN CONNECTION MADE TO CUSTOMER LINE
8. BRASS CURB STOP, FORD B41-444-NL OR EQUAL.
9. WATER METER - TO BE SUPPLIED BY THE CITY
10. METER BOX SHALL BE SIGMA RAVEN HDPE METER BOX MODEL 1324-SW. PROVIDE HDPE LID WITH TOUCH READ AND METER READER LID. PLACE BACK OF METER BOX FLUSH WITH PROPERTY LINE.

Port ORCHARD Est. 1890	SERVICES A 5/8, 3/4, OR 1-INCH WATER SERVICE	DRAWN BY	IDS
		DATE	1/22/2019
		SCALE	NTS
		DRAWING NUMBER	860



NOTES:

1. MAIN VALVE OPENING SHALL BE 5-1/4" IN DIAMETER EQUAL TO M&H 929. 6" MECHANICAL JOINT INLET. 1-1/2" PENTAGON OPERATING NUT. THE CITY WILL PAINT THE HYDRANT.
2. LOCATOR WIRE TO BE PROTECTED WITH ANGLE ALUMINUM (3/4" X 1/20" X 2' LONG) STRAP TO THE HYDRANT BURY WITH CABLE TIES (36" LENGTH, 175 LB TENSILE, COLOR BLACK, MANUFACTURED BY 3M). LOCATION SHALL BE BELOW THE LOWER FLANGE OF THE HYDRANT BELOW THE PUMPER PORT. LOCATE WIRE SHALL HAVE 6" SLACK FOR CONNECTING TO LOCATING DEVICE.
3. IF THE PIPE BETWEEN THE VALVE AND THE HYDRANT IS MORE ONE FULL STICK OF DUCTILE IRON PIPE, THEN A TIE BACK THRUST SHALL BE INSTALLED AND FIELD-LOK GASKETS AND MEGA LUGS SHALL BE USED.

Port ORCHARD Est. 1890	SYSTEM APPURTENANCES B FIRE HYDRANT ASSEMBLY	DRAWN BY	IDS
		DATE	1/23/2019
		SCALE	NTS
		DRAWING NUMBER	881

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SHEET 15 OF 21

FILE NO 483D

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City of Port Orchard
Community Development

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PW21-003

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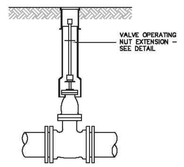
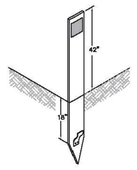


EXTENSIONS ARE REQUIRED WHEN THE VALVE NUT IS MORE THAN THREE (3) FEET BELOW FINISHED GRADE. EXTENSIONS ARE TO BE A MINIMUM OF ONE (1) FOOT LONG, ONLY ONE EXTENSION PER VALVE. ALL EXTENSIONS ARE TO MADE OF STEEL SIZED AS NOTED, AND PAINTED WITH TWO COATS OF CARBON ELASTIC (ATCO NO. 2221) OR APPROVED EQUAL.

VALVE OPERATING NUT EXTENSION



VALVE MARKER POST

PROVIDE A VALVE MARKER POST FOR EACH VALVE. THE FIBERGLASS VALVE MARKER POST SHALL BE BLUE IN COLOR, 4" WIDE (FLAT), 72" LONG AND FURNISHED WITH A 2"x2" HIGH-INTENSITY WHITE REFLECTOR (250 CANDLEPOWER) AND A FLEXIBLE ANCHOR BARB.

THE VALVE MARKER POST SHALL BE A CARSONITE CURV-FLEX MARKER OR APPROVED EQUAL.

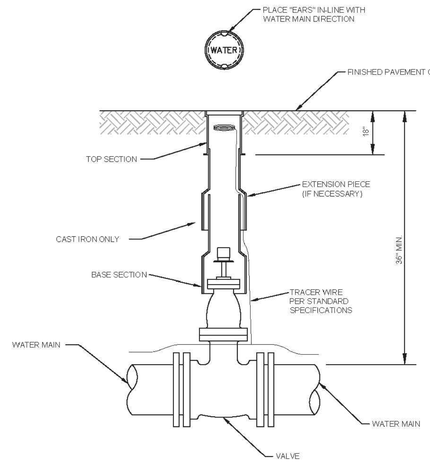
THE POST SHALL BE SITUATED IN A SAFE, REASONABLY CONSPICUOUS LOCATION, AND AT A RIGHT ANGLE TO THE ROADWAY FROM THE VALVE.

THE DISTANCE FROM THE MARKER TO THE VALVE SHALL BE WRITTEN ON THE BACK OF THE MARKER IN 1-1/2" HIGH BLACK LETTERS.

VALVE MARKER

U:\ENGINEERING\DEVELOPMENT GUIDELINES\2019 UPDATES_STANDARD DETAILS\NEW STANDARDS\CAD FILES\901

Port ORCHARD Est. 1890	SYSTEM APPURTENANCES C	DRAWN BY	IDS
	VALVE MARKER AND VALVE EXTENSION	DATE	1/30/2013
		SCALE	NTS
		DRAWING NUMBER	892



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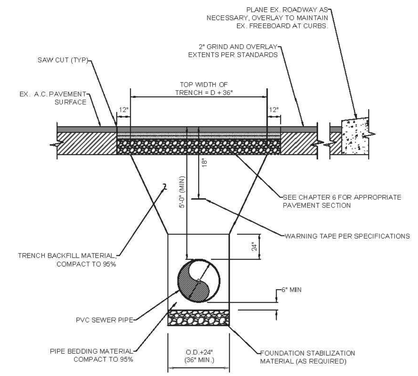
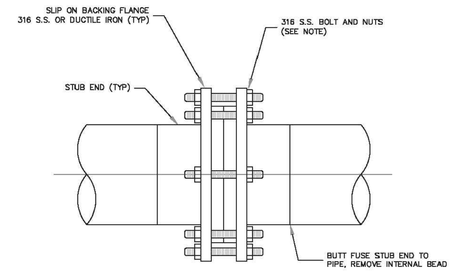
Port ORCHARD Est. 1890	SYSTEM APPURTENANCES	DRAWN BY	IDS
	VALVE BOX	DATE	1/23/2019
		SCALE	NTS
		DRAWING NUMBER	904



NOTES:
1) BED THE ENTIRE WIDTH OF THE TRENCH PAVEMENT.
2) RESTORATION SHALL BE PER THE APPROPRIATE SECTION IN CHAPTER 6 (PAVEMENT SURFACING).

U:\ENGINEERING\DEVELOPMENT GUIDELINES\2019 UPDATES_STANDARD DETAILS\NEW STANDARDS\CAD FILES\900

Port ORCHARD Est. 1890	TRENCHES AND PIPE CONNECTIONS A	DRAWN BY	IDS
	SEWER TRENCH DETAILS	DATE	1/23/2019
		SCALE	NTS
		DRAWING NUMBER	900



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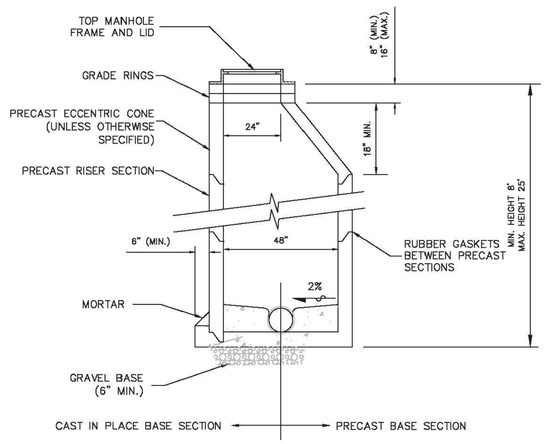
Port ORCHARD Est. 1890	TRENCHES AND PIPE CONNECTIONS B	DRAWN BY	IDS
	HDPE FLANGE CONNECTION	DATE	1/30/2019
		SCALE	NTS
		DRAWING NUMBER	901



NOTES:
1. MATCH CROWNS OF SEWERS.
2. FOR CAST IN PLACE BASE, CONSTRUCT IN FIELD CHANNEL AND SHELF TO THE CROWN OF THE PIPE.
3. FOR PRECAST BASE, USE GRAVEL BACKFILL, 6" MIN. COMPACTED DEPTH UNDER THE BASE.
4. ALL RIGID PIPE ENTERING OR LEAVING THE MANHOLE SHALL BE PROVIDED WITH FLEXIBLE JOINTS WITHIN 1 ½ PIPE DIAMETERS OF THE MANHOLE STRUCTURE.
5. INSTALL DROP MANHOLE CONNECTION IF INVERT OF ANY INCOMING SEWER IS MORE THAN 2'-0" ABOVE THE TOP OF THE MAIN SEWER.
6. IN UNIMPROVED AREAS AND EASEMENTS, MANHOLE SHALL EXTEND A MINIMUM OF 2" AND A MAXIMUM OF 4" ABOVE FINISHED GRADE.
7. MANHOLE RING AND COVER SHALL HAVE A CLEAR OPENING. WORDING ON COVER SHALL BE "SEWER" IN 3" RAISED LETTERS.
8. ALL MANHOLE JOINTS SHALL USE A CONFINED ROUND RUBBER GASKET MEETING ASTM C-443 SPECIFICAITONS.

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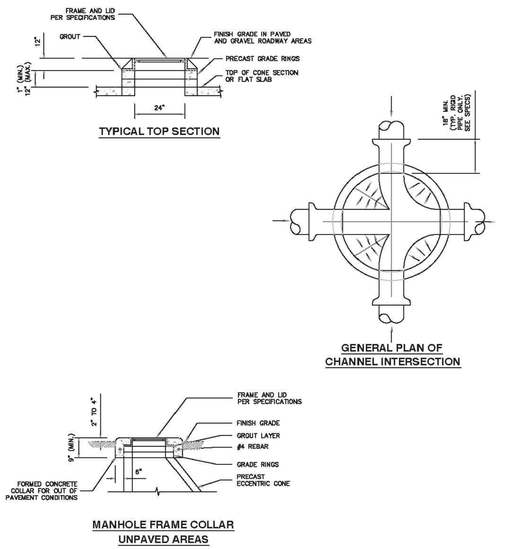
Port ORCHARD Est. 1890	MANHOLES A	DRAWN BY	IDS
	MANHOLE DETAIL 48"	DATE	1/30/2019
		SCALE	NTS
		DRAWING NUMBER	920



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Port ORCHARD Est. 1890	MANHOLES C	DRAWN BY	IDS
	TOP SECTION AND CHANNELIZATION	DATE	1/30/2019
		SCALE	NTS
		DRAWING NUMBER	922

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JAN 13, 2021
City of Port Orchard
Community Development

PW21-002
PW21-003

DESIGN	MAK
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CHECKED	MAK
SEC 25 T 24N R 1E	
DISC NO	DATE 12/01/2020
SCALE	AS NOTED

REV NO	REVISION DESCRIPTION	DATE	BY

1/12/2021

PROJECT MANAGER JASON K. ANDERSON, EIT

SIGNATURE

TITLE PLISKO LN MULTI FAMILY
DETAILS

CLIENT DISNEY & ASSOCIATES
BOB DISNEY
5706 BETHEL RD, STE 100
PORT ORCHARD, WA 98367
(360) 895-7747

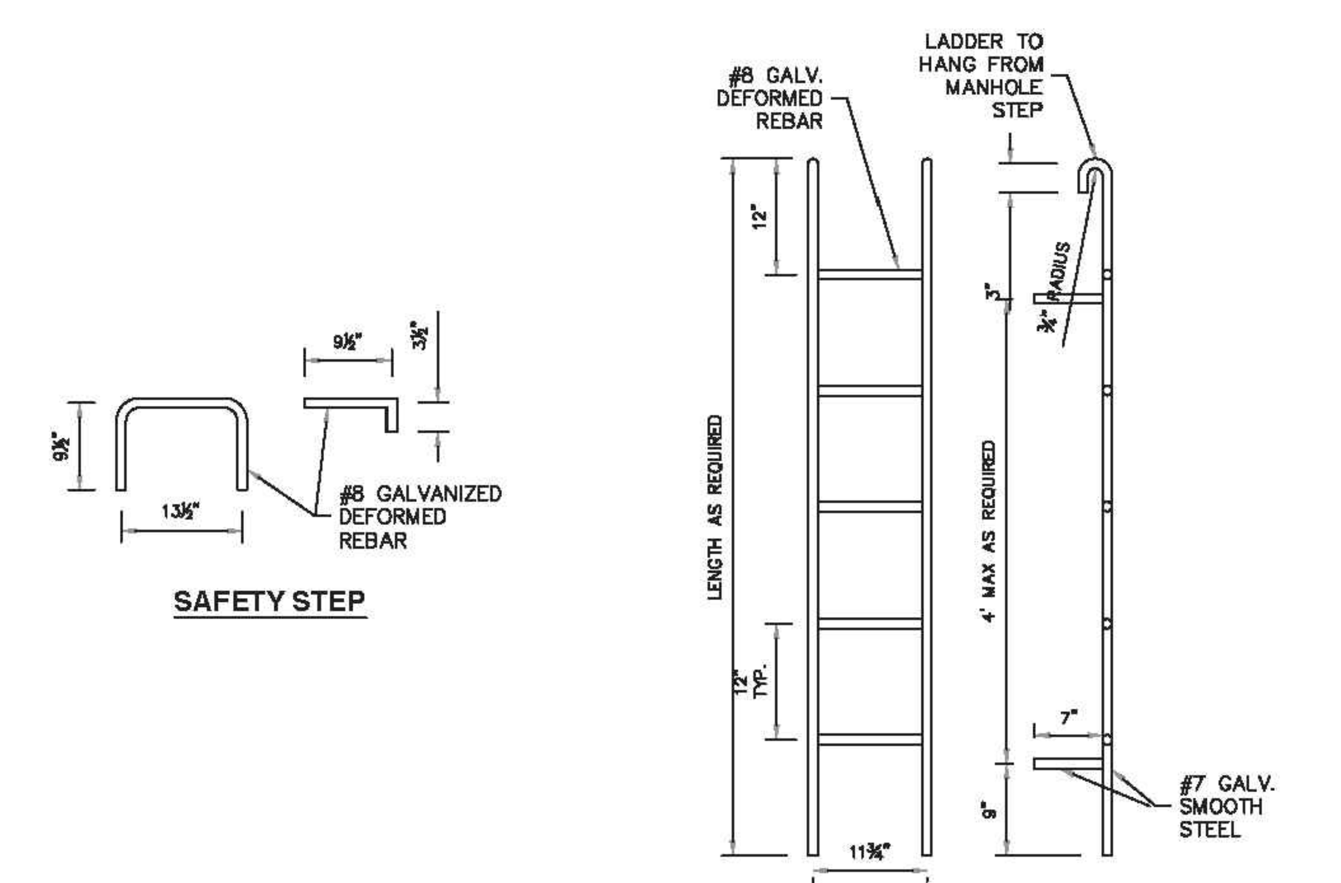
TEAM 4 ENGINEERING
5819 NE MINDER RD
POULSBO, WA. 98370
(360) 297-5560
(360) 297-7951 (FAX)

SHEET 16 OF 21

FILE NO 483D

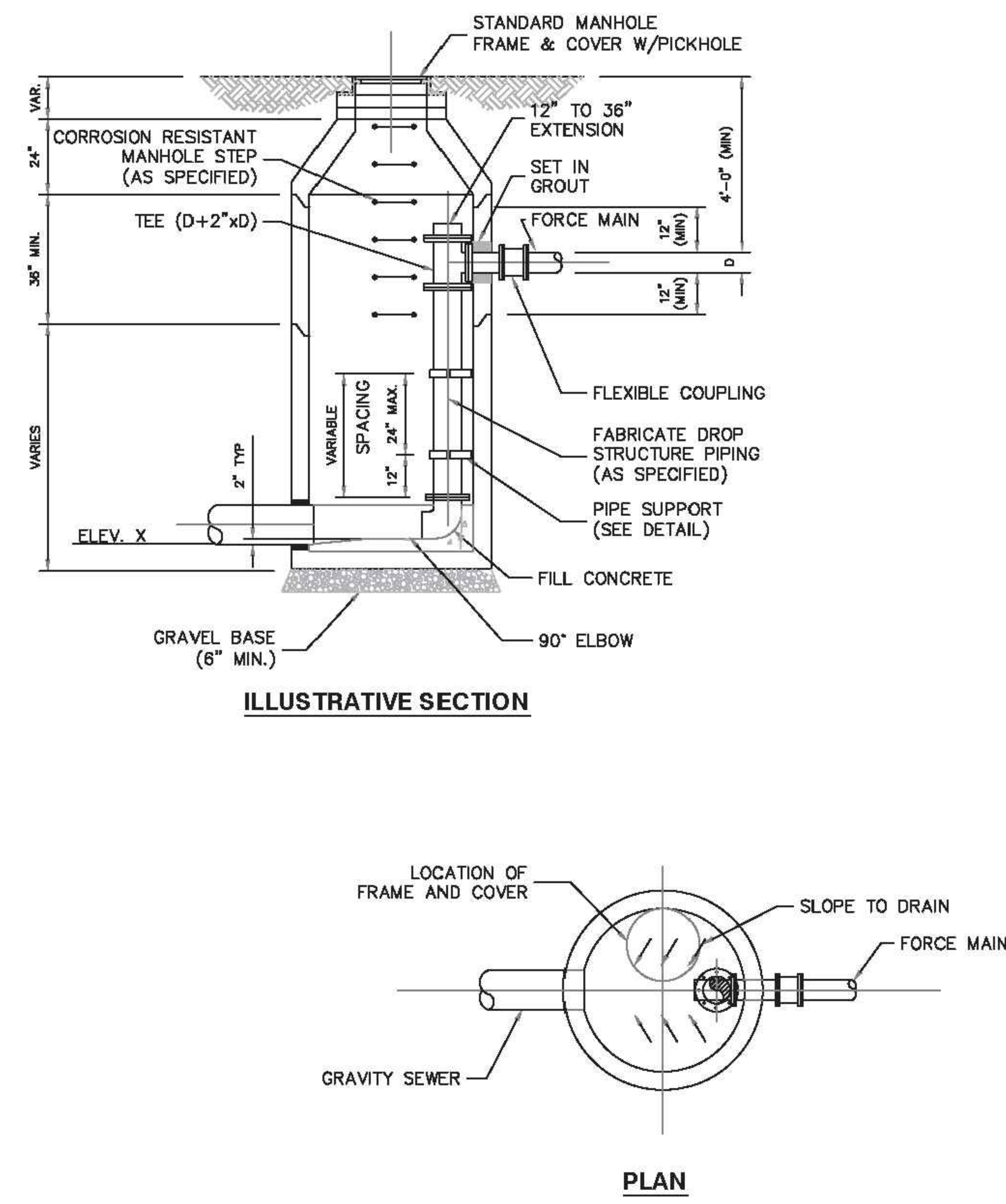
PLISKO LN MULTI FAMILY

DETAILS

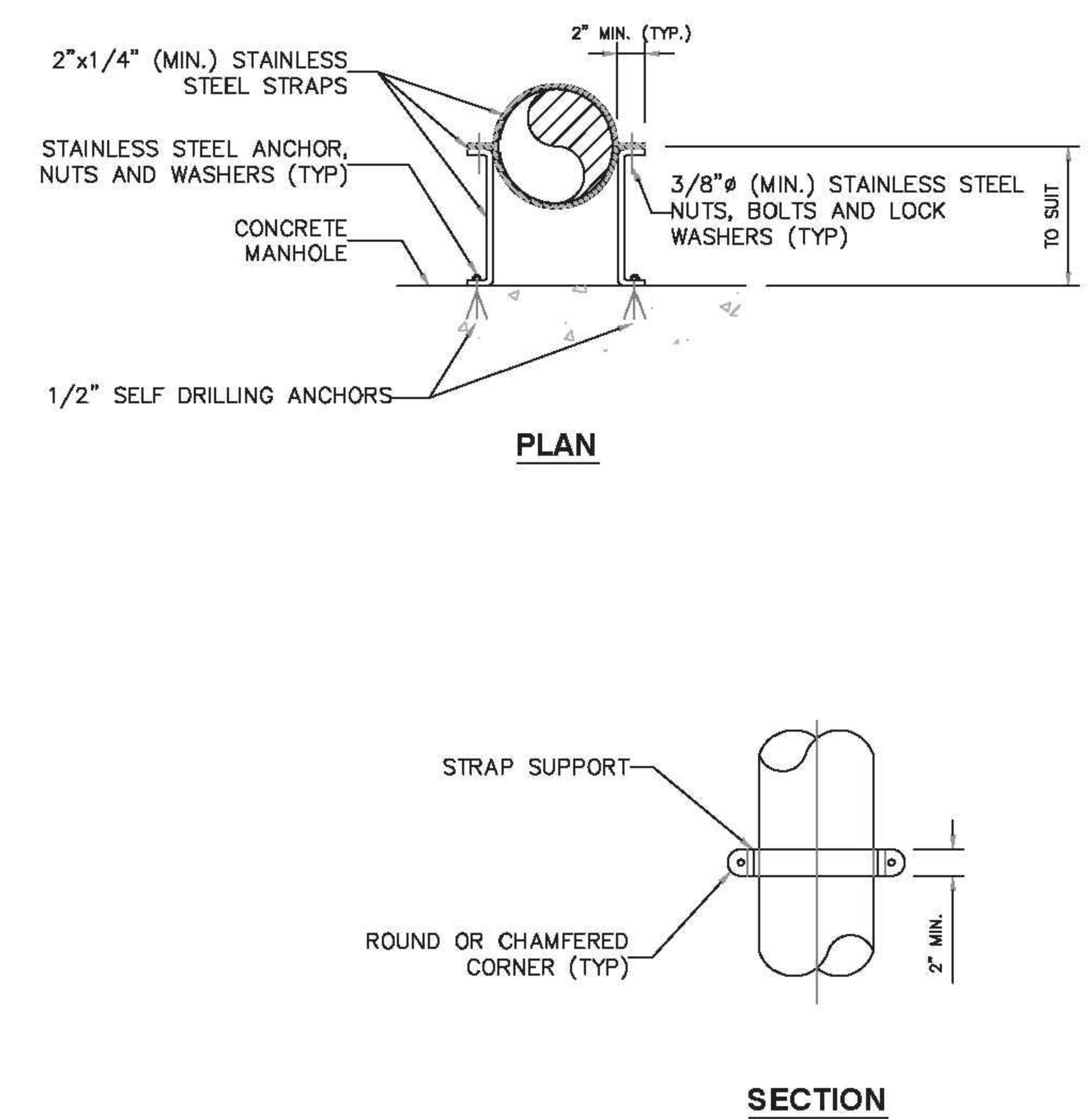


SAFETY STEP

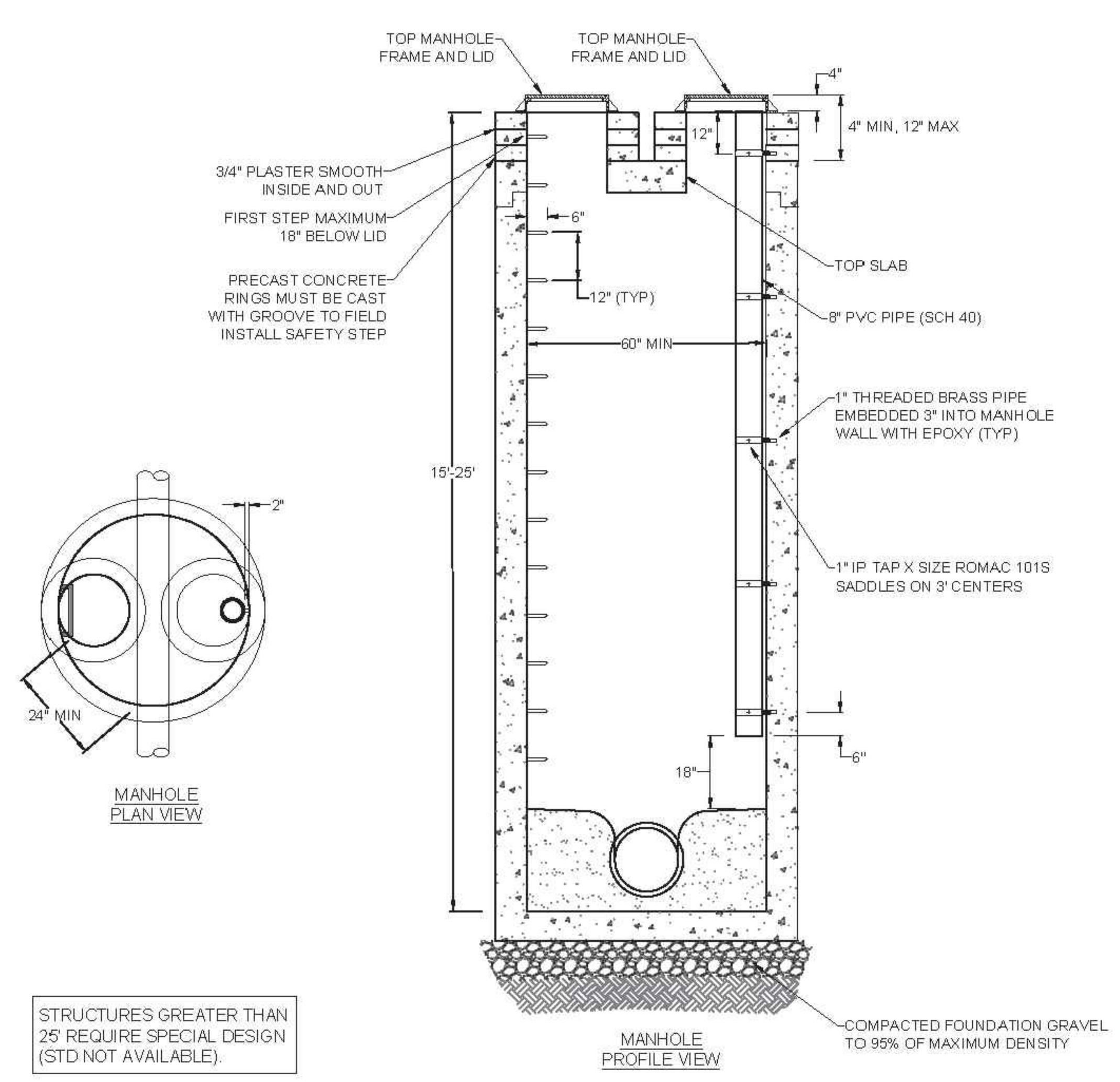
Port ORCHARD Est. 1890	MANHOLES E MANHOLE DETAIL - LADDER	DRAWN BY	IDS
		DATE	1/30/2019
		SCALE	NTS
		DRAWING NUMBER	924



Port ORCHARD Est. 1890	MANHOLES G FORCE MAIN INSIDE DROP/RECEIVING MANHOLE	DRAWN BY	IDS
		DATE	1/30/2019
		SCALE	NTS
		DRAWING NUMBER	926



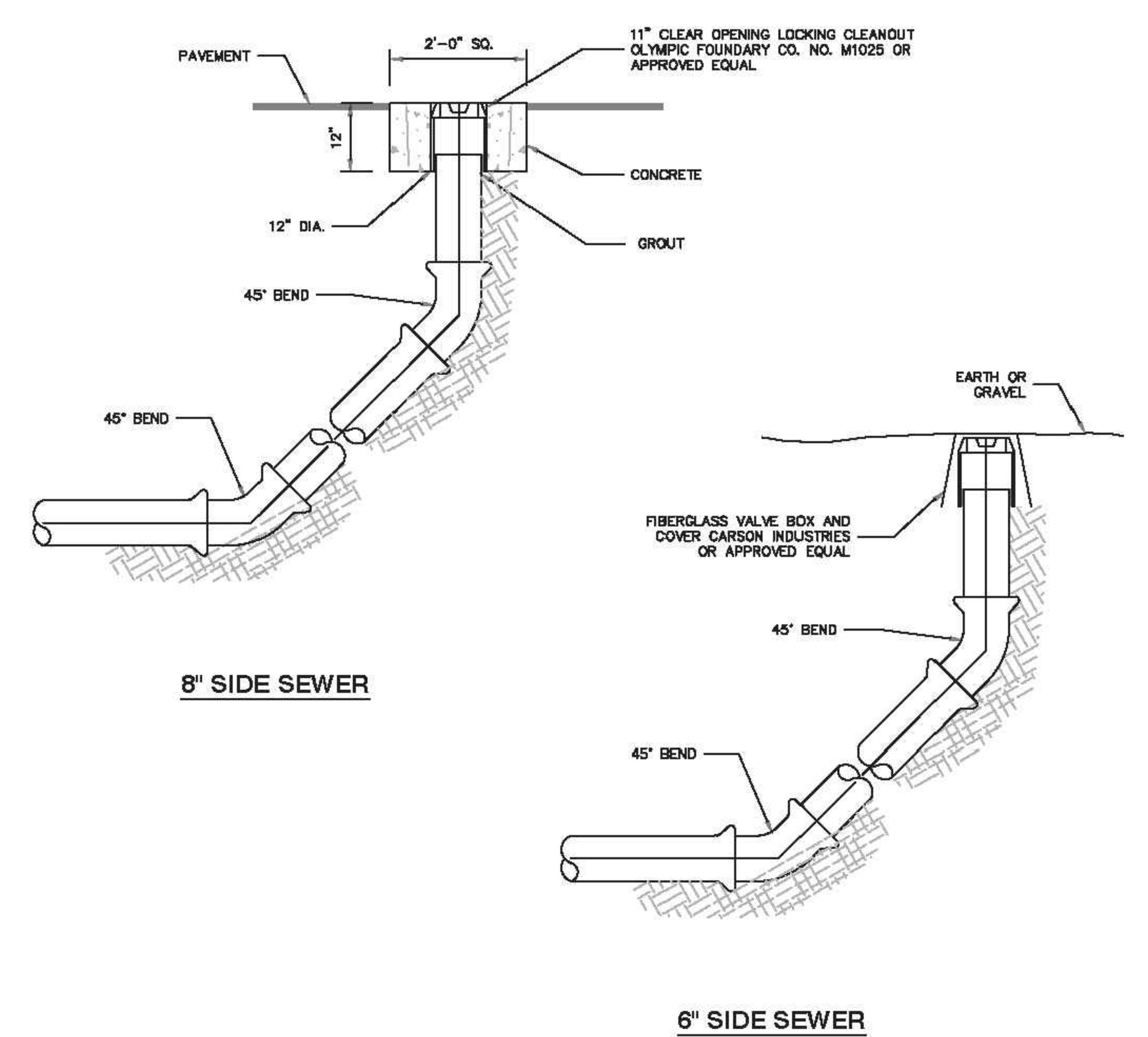
Port ORCHARD Est. 1890	MANHOLES H FORCE MAIN DROP CLIP SUPPORT	DRAWN BY	IDS
		DATE	1/30/2019
		SCALE	NTS
		DRAWING NUMBER	927



NOTES:

1. PROVIDE TWO 24" ACCESS LIDS.
2. MANHOLE SHALL CONFORM TO GENERAL NOTES AND ALL APPLICABLE REQUIREMENTS OF STANDARD 1220.
3. MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASHTO M199 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE STANDARDS AND SPECIFICATIONS.
4. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000. NON-REINFORCED CONCRETE IN CHANNEL AND SHELF SHALL BE CLASS 3000. ALL PRECAST CONCRETE SHALL BE CLASS 4000.
5. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE WALL THICKNESS OF 2" MIN. UNUSED KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT INTACT, PIPES SHALL BE INSTALLED ONLY IN FACTORY KNOCKOUTS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
6. ALL MANHOLES SHALL BE LINED PER CITY OF PORT ORCHARD STANDARDS AND SPECIFICATIONS
7. TOP SLAB MUST MEET HS-20 LOADING CRITERIA.

Port ORCHARD Est. 1890	MANHOLES J MANHOLE GREATER THAN 15'	DRAWN BY	IDS
		DATE	1/24/2019
		SCALE	NTS
		DRAWING NUMBER	928



NOTES:

1. IF NOT PERMANENT END OF SEWER, USE TYLOX GASKET OR APPROVED EQUAL, AND SECURE WITH #8 WIRE PIN THRU HOLES DRILLED IN HUB. IF PERMANENT END OF SEWER USE MORTAR TO SECURE PLUG.
2. IF INSTALLATION OCCURS IN UNPAVED AREA USE CONCRETE ANCHOR AS SHOWN FOR ASPHALT PAVING AND BACKFILL TO TOP OF CAST IRON RING WITH SOIL.
3. RESTORATION SHALL BE IN ACCORDANCE WITH CHAPTER 6.
4. TRENCH BACKFILL SHALL BE COMPACTED AND TESTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS.

Port ORCHARD Est. 1890	CLEANOUTS A SEWER CLEANOUT DETAIL	DRAWN BY	IDS
		DATE	1/30/2019
		SCALE	NTS
		DRAWING NUMBER	960

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PW21-002
PW21-003

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CHECKED MAK
SEC 25 T 24N R 1E
DISC NO ___ DATE 12/01/2020
SCALE AS NOTED

MARK A. KUHLMAN, STATE OF WASHINGTON, 18648, PROFESSIONAL ENGINEER
1/12/2021

TITLE PLISKO LN MULTI FAMILY
DETAILS

CLIENT DISNEY & ASSOCIATES
BOB DISNEY
5706 BETHEL RD, STE 100
PORT ORCHARD, WA 98367
(360) 895-7747

PROJECT MANAGER: JASON K ANDERSON, EIT
SIGNATURE:

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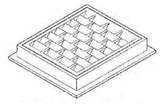
5819 NE MINDER RD
POULSBO, WA. 98370
(360) 297-5560
(360) 297-7951 (FAX)

SHEET 17 OF 21
FILE NO 483D

PLISKO LN MULTI FAMILY

DETAILS

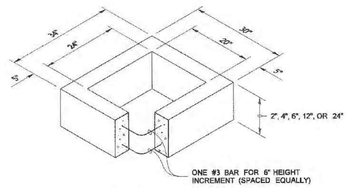
DRAWN BY: LISA CYFORD



FRAME AND VANED GRATE

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP * (STD. SPEC. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	15"

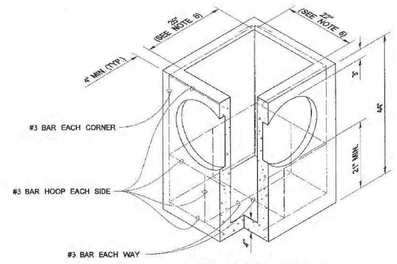
* CORRUGATED POLYETHYLENE STORM SEWER PIPE



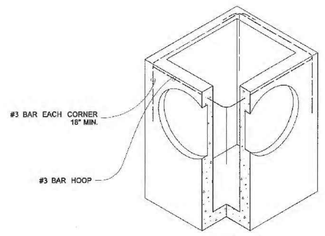
RECTANGULAR ADJUSTMENT SECTION

NOTES

1. As acceptable alternatives to the rebar shown in the PRECAST BASE SECTION, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the ALTERNATIVE PRECAST BASE SECTION. Wire mesh shall not be placed in the knockouts.
2. The knockout diameter shall not be greater than 20". Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification 9-04.3.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5'.
4. The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.
5. The opening shall be measured at the top of the Precast Base Section.
7. All pickup holes shall be grouted full after the basin has been placed.



PRECAST BASE SECTION



ALTERNATIVE PRECAST BASE SECTION

CASEY M. KRAMER — STATE OF WASHINGTON — 24530 — REGISTERED PROFESSIONAL ENGINEER

6/15/11

CATCH BASIN TYPE 1

STANDARD PLAN B-5.20-01

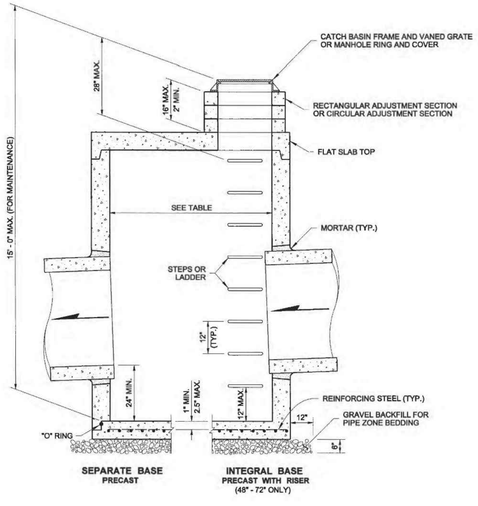
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Pasco Bakotich III — STATE DESIGN ENGINEER — 6/16/11 — DATE

Washington State Department of Transportation

DRAWN BY: LISA CYFORD



SEPARATE BASE PRECAST

INTEGRAL BASE PRECAST WITH RISER (48" - 72" ONLY)

NOTES

1. No steps are required when height is 4' or less.
2. The bottom of the precast catch basin may be sloped to facilitate cleaning.
3. The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
4. Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with **Standard Specification 9-04.3.**

CATCH BASIN DIMENSIONS				
CATCH BASIN DIAMETER	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"
72"	6"	8"	60"	12"
84"	8"	12"	72"	12"
96"	8"	12"	84"	12"
120"	10"	12"	96"	12"
144"	12"	12"	108"	12"

PIPE ALLOWANCES					
CATCH BASIN DIAMETER	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER				
	CONCRETE	ALL METAL	CPSSP ①	SOLID WALL PVC ②	PROFILE WALL PVC ③
48"	24"	30"	24"	30"	30"
54"	30"	36"	30"	36"	36"
60"	36"	42"	36"	42"	42"
72"	42"	54"	42"	48"	48"
84"	54"	60"	54"	48"	48"
96"	60"	72"	60"	48"	48"
120"	66"	84"	60"	48"	48"
144"	78"	96"	60"	48"	48"

① Corrugated Polyethylene Storm Sewer Pipe (Standard Specification 9-05.20)
② (Standard Specification 9-05.12(1))
③ (Standard Specification 9-05.12(2))

CASEY M. KRAMER — STATE OF WASHINGTON — 24530 — REGISTERED PROFESSIONAL ENGINEER

1-3-12

CATCH BASIN TYPE 2

STANDARD PLAN B-10.20-01

SHEET 1 OF 1 SHEET

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Pasco Bakotich III — STATE DESIGN ENGINEER — 2/7/12 — DATE

Washington State Department of Transportation

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City of Port Orchard
Community Development

PW21-002
PW21-003

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DISC NO DATE 2/01/2020
SCALE AS NOTED

REV NO	REVISION DESCRIPTION	DATE	BY

KRAMER — STATE OF WASHINGTON — 24530 — REGISTERED PROFESSIONAL ENGINEER

1/12/2021

SIGNATURE:

PROJECT MANAGER: JASON K. ANDERSON, EIT

TITLE PLISKO LN MULTI FAMILY
DETAILS

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(360) 895-7747

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POULSBO, WA 98370
(360) 297-5560
(360) 297-7951 (FAX)

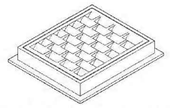
SHEET 18 OF 21

FILE NO 483D

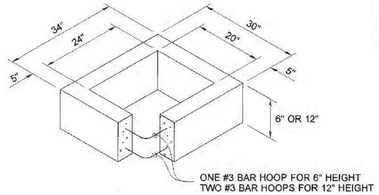
PLISKO LN MULTI FAMILY

DETAILS

DRAWN BY: MARK SUJKA



FRAME AND VANED GRATE



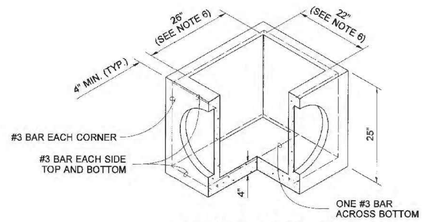
RECTANGULAR ADJUSTMENT SECTION

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP * (STD. SPEC. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	15"

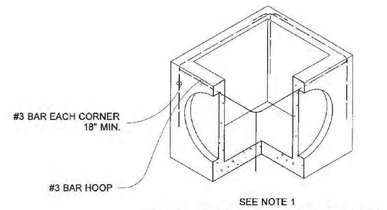
* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

1. As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the **ALTERNATIVE PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
2. The knockout diameter shall not be greater than 18". Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification 9-04.3.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5'.
4. The frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.
6. The opening shall be measured at the top of the precast base section.
7. All pickup holes shall be grouted full after the inlet has been placed.



PRECAST BASE SECTION



ALTERNATIVE PRECAST BASE SECTION

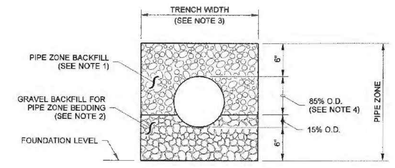
MATTHEW J. WITTICH
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
6/1/06
EXPIRES JULY 1, 2007

CONCRETE INLET

STANDARD PLAN B-25.60-00

SHEET 1 OF 1 SHEET

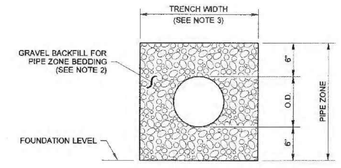
APPROVED FOR PUBLICATION
Harold Pilmoor 6-1-06
STATE DESIGN ENGINEER — DATE
Washington State Department of Transportation



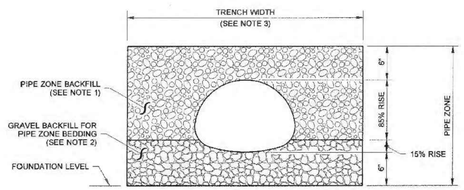
CONCRETE AND DUCTILE IRON PIPE

NOTES

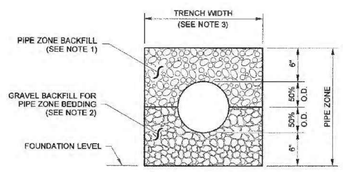
1. See Standard Specifications Section 7-08.3(3) for Pipe Zone Backfill.
2. See Standard Specifications Section 9-03.12(3) for Gravel Backfill for Pipe Zone Bedding.
3. See Standard Specifications Section 2-09.4 for Measurement of Trench Width.
4. For sanitary sewer installation, concrete pipe shall be bedded to spring line.



THERMOPLASTIC PIPE



PIPE ARCHES



METAL PIPE

CLEARANCE BETWEEN PIPES FOR MULTIPLE INSTALLATIONS		
PIPE	SIZE	MINIMUM DISTANCE BETWEEN BARRELS
CIRCULAR PIPE (DIAMETER)	12" to 24"	12"
	30" to 96"	DIAM. /2
	102" to 180"	48"
PIPE ARCH (SPAN) METAL ONLY	18" to 36"	12"
	43" to 142"	SPAN /3
	148" to 200"	48"

MATTHEW J. WITTICH
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
6/1/06
EXPIRES JULY 1, 2007

PIPE ZONE BEDDING AND BACKFILL

STANDARD PLAN B-55.20-00

SHEET 1 OF 1 SHEET

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Harold Pilmoor 6-1-06
STATE DESIGN ENGINEER — DATE
Washington State Department of Transportation

COUNTER COMPLETE
Permit Center
JAN 13, 2021
City of Port Orchard
Community Development

PW21-002
PW21-003

DESIGN MAK
DRAWN JKA
CHECKED MAK
SEC 25 T 24N R 1E
DISC NO DATE 12/01/2020
SCALE AS NOTED

REV NO	REVISION DESCRIPTION	DATE	BY

MARK A. KUHLMAN — 18849 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON
1/12/2021

PROJECT MANAGER JASON K. ANDERSON, EIT

SIGNATURE

TITLE PLISKO LN MULTI FAMILY
DETAILS

CLIENT DISNEY & ASSOCIATES
BOB DISNEY
5706 BETHEL RD, STE 100
PORT ORCHARD, WA 98367
(360) 895-7747

PROJECT MANAGEMENT ENGINEERING PLANNING CONSULTING TEAM 4

TEAM 4 ENGINEERING
5819 NE MINDER RD
POULSBO, WA. 98370
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(360) 297-7951 (FAX)

SHEET 19 OF 21

FILE NO 483D

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PLISKO LN MULTI FAMILY

DETAILS

StormTech

ADS

MC-4500 CHAMBER

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for private (commercial) and public applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.

STORMTECH MC-4500 CHAMBER
(not to scale)

Nominal Chamber Specifications

Size (L x W x H)
52" x 100" x 60"
1321 mm x 2540 mm x 1524 mm

Chamber Storage
106.5 ft³ (3.01 m³)

Min. Installed Storage*
162.6 ft³ (4.60 m³)

Weight
Nominal 125 lbs (56.7 kg)

Shipping
7 chambers/pallet
5 end caps/pallet
11 pallets/truck

*Assumes a minimum of 12" (300 mm) of stone above, 9" (230 mm) of stone below chambers, 9" (230 mm) of stone between chambers/end caps and 40% stone porosity.

STORMTECH MC-4500 END CAP
(not to scale)

Nominal End Cap Specifications

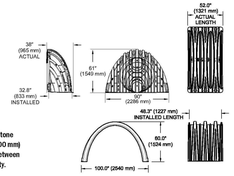
Size (L x W x H)
38" x 90" x 61"
965 mm x 2286 mm x 1549 mm

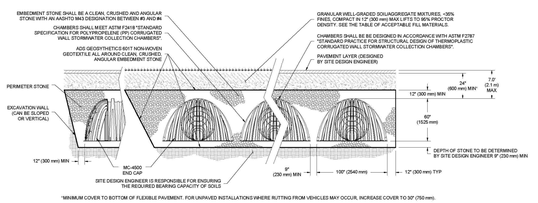
End Cap Storage
39.5 ft³ (1.12 m³)

Min. Installed Storage*
115.3 ft³ (3.26 m³)

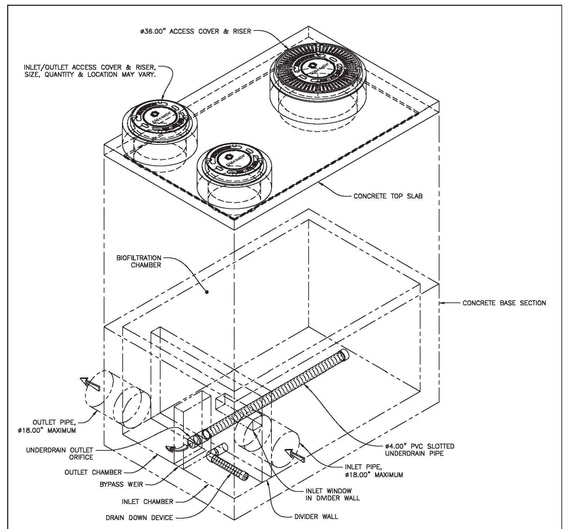
Weight
Nominal 90.0 lbs (40.8 kg)

*Assumes a minimum of 12" (300 mm) of stone above, 9" (230 mm) of stone below, 12" (300 mm) of stone perimeter, 9" (230 mm) of stone between chambers/end caps and 40% stone porosity.





*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 30" (750 mm).



ISOMETRIC VIEW
FILTER MEDIA & DRAIN ROCK NOT SHOWN FOR CLARITY.
SCALE: 1X

NOTES:
1. LEFT CONFIGURATION SHOWN, MIRROR RIGHT CONFIGURATION OF INLET AND OUTLET CHAMBER AVAILABLE.
2. CONTACT OLDCASTLE INFRASTRUCTURE FOR ENGINEERING ASSISTANCE AND DETAIL DRAWINGS.
3. CONCRETE COMPONENTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C890 & C913.

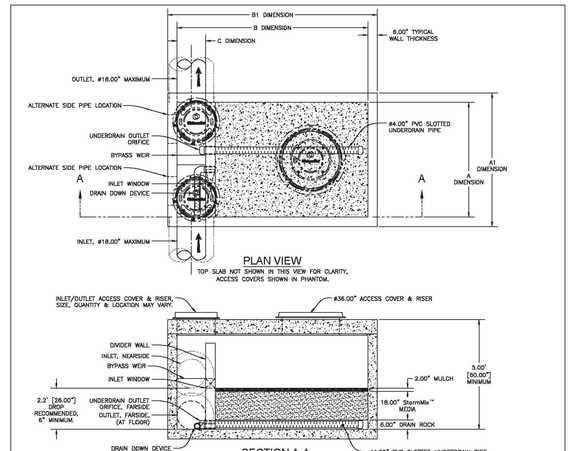
US Patents Pending

Bioretention/ Biofiltration

BioPod™ Biofilter Underground
Vault with Internal Bypass

Oldcastle Infrastructure™ A CRH COMPANY

DRAWING NO.	REV	ECO	DATE	
BPU-IB	C	ECO-0169 CJS 3/6/20	PPS 3/9/20	SHEET 1 OF 2



PLAN VIEW
TOP SLAB NOT SHOWN IN THIS VIEW FOR CLARITY, ACCESS COVERS SHOWN IN PHANTOM.

SECTION A-A

MODEL	VAULT SIZE[1] (ID)			VAULT FOOTPRINT[1] (OD)		TREATMENT FLOW CAPACITY (GPM/CFS)	
	A DIM	B DIM	C DIM	A1 DIM	B1 DIM	1.6 GPM/SF (WA GULD[2])	1.9 GPM/SF (NJCAT[3])
BPU-4618	4'	8'	1.5'	5'	7'	25.6 / 0.057	28.8 / 0.064
BPU-4818	4'	8'	1.5'	5'	9'	38.4 / 0.086	43.2 / 0.096
BPU-4812IB	4'	12'	1.5'	5'	13'	64.0 / 0.143	72.0 / 0.160
BPU-6618	6'	6'	1.5'	7'	7'	38.4 / 0.086	43.2 / 0.096
BPU-6818	6'	8'	1.5'	7'	9'	57.6 / 0.128	64.8 / 0.144
BPU-6812IB	6'	12'	2'	7'	13'	91.2 / 0.203	102.6 / 0.229
BPU-8212IB	8'	12'	2'	9'	13'	121.6 / 0.271	136.9 / 0.305
BPU-8516IB	8'	16'	2'	9'	17'	172.8 / 0.385	194.4 / 0.433

[1] All Dimensions are nominal, ID=Inside Dimension, OD=Outside Dimension.
[2] Treatment flow capacity at 1.6 gpm/sf media surface area based on an WA Ecology GULD Approval for Basic, Enhanced & Phosphorus.
[3] Treatment flow capacity at 1.9 gpm/sf media surface area based on an NJCAT Verification & NJ DEP Certification.

SITE SPECIFIC DATA					
Structure ID					
Model Size					
Orientation (Left or Right)					
Treatment Flow Rate (cfs)					
Peak Flow Rate (cfs)					
Rim Elevation					
Pipe Data	Pipe Location (Front or Side)	Pipe Size	Pipe Type	Invert Elevation	
Inlet					
Outlet					
Notes:					

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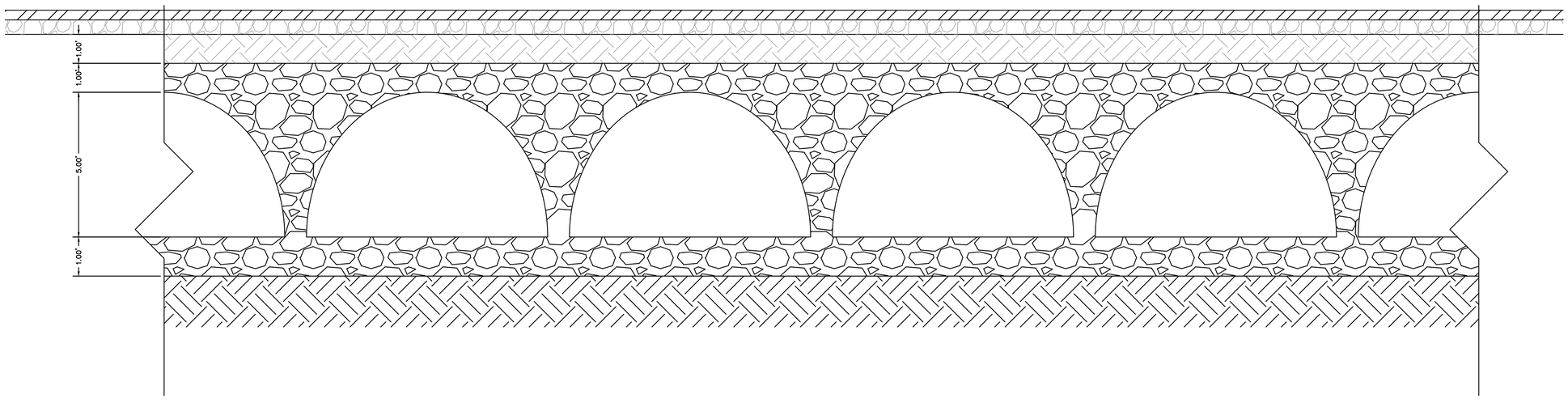
DRAWING NO.	REV	ECO	DATE	
BPU-IB	C	ECO-0169 CJS 3/6/20	PPS 3/9/20	SHEET 2 OF 2



SECTION A–A DETENTION CHAMBER (9)
H SCALE: 1" = 5'
V SCALE: 1" = 2.5'

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KUHLMAN — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 46346 — 1/12/2021

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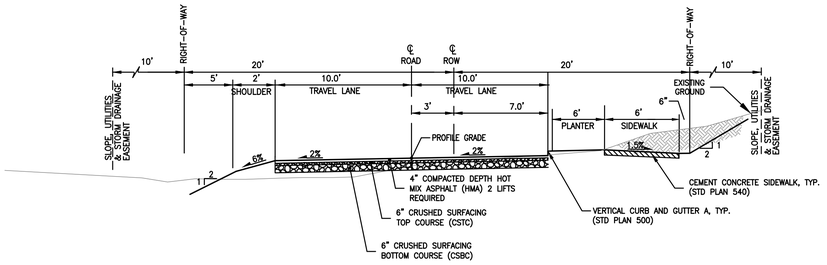
SHEET 20 OF 21

FILE NO 483D

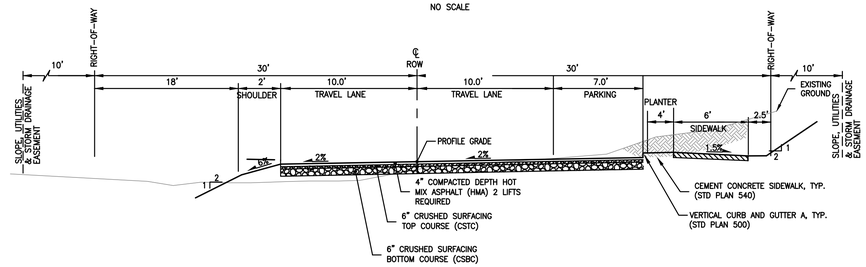
PLISKO LN MULTI FAMILY

ROAD SECTIONS



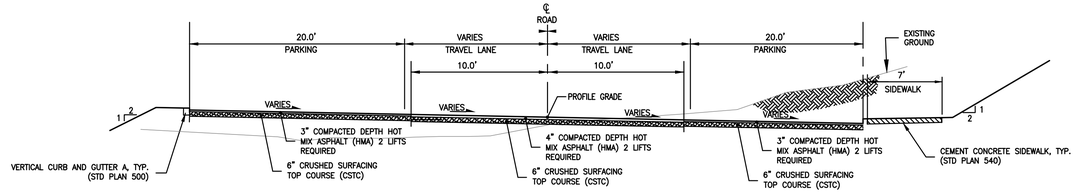
PLISKO LANE
20' WIDE ROADWAY, NO PARKING
PAVEMENT SECTION, SIDEWALK ONE SIDE

NO SCALE



PLISKO LANE
20' WIDE ROADWAY, PARKING ONE SIDE
PAVEMENT SECTION, SIDEWALK ONE SIDE

NO SCALE



DRIVE AISLE AND PARKING
62' – 65' WIDE DRIVING AND PARKING
PAVEMENT SECTION, SIDEWALK ONE SIDE

NO SCALE

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