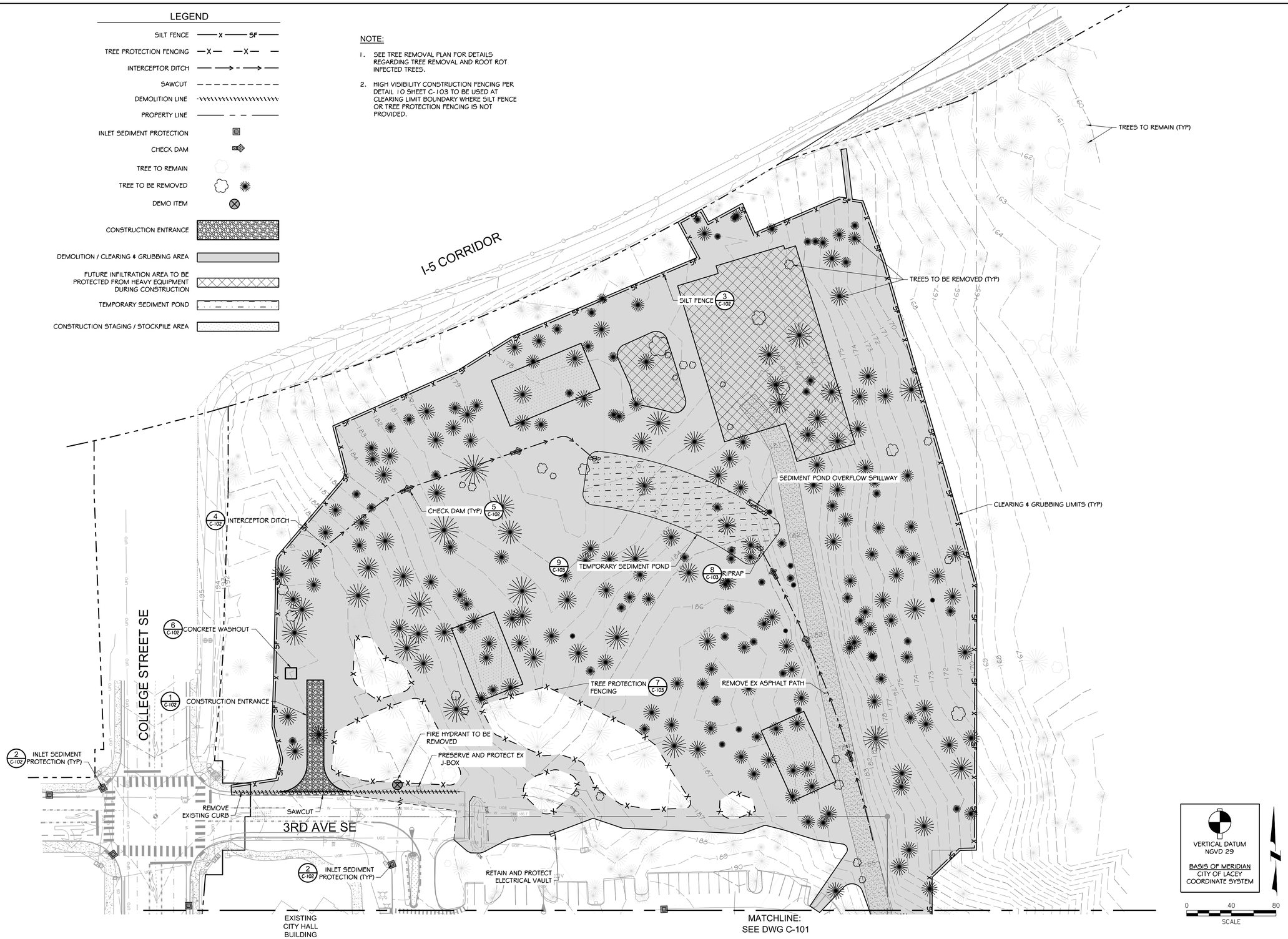
LEGEND

- SILT FENCE
- TREE PROTECTION FENCING
- INTERCEPTOR DITCH
- SAWCUT
- DEMOLITION LINE
- PROPERTY LINE
- INLET SEDIMENT PROTECTION
- CHECK DAM
- TREE TO REMAIN
- TREE TO BE REMOVED
- DEMO ITEM
- CONSTRUCTION ENTRANCE
- DEMOLITION / CLEARING & GRUBBING AREA
- FUTURE INFILTRATION AREA TO BE PROTECTED FROM HEAVY EQUIPMENT DURING CONSTRUCTION
- TEMPORARY SEDIMENT POND
- CONSTRUCTION STAGING / STOCKPILE AREA

NOTE:

1. SEE TREE REMOVAL PLAN FOR DETAILS REGARDING TREE REMOVAL AND ROOT ROT INFECTED TREES.
2. HIGH VISIBILITY CONSTRUCTION FENCING PER DETAIL 10 SHEET C-103 TO BE USED AT CLEARING LIMIT BOUNDARY WHERE SILT FENCE OR TREE PROTECTION FENCING IS NOT PROVIDED.



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KPFF Project # 10182200044

BENJAMIN E. A. ENDRIS — STATE OF WASHINGTON — 49448 — REGISTERED PROFESSIONAL ENGINEER
04/21/2023

NEW POLICE STATION
CITY OF LACEY
222 COLLEGE STREET SE, LACEY, WA 98503
CITY PROJECT NO. PW 2022-13

ORIGINAL SHEET SIZE = 24 x 36
HALF SIZE REDUCTIONS = 11 x 17

REVISIONS:

DATE: 04.20.2023

SITE PLAN REVIEW

SHEET NO.
C-100
TESC PLAN NORTH

LEGEND

- SILT FENCE
- TREE PROTECTION FENCING
- INTERCEPTOR DITCH
- SAWCUT
- DEMOLITION LINE
- PROPERTY LINE
- INLET SEDIMENT PROTECTION
- CHECK DAM
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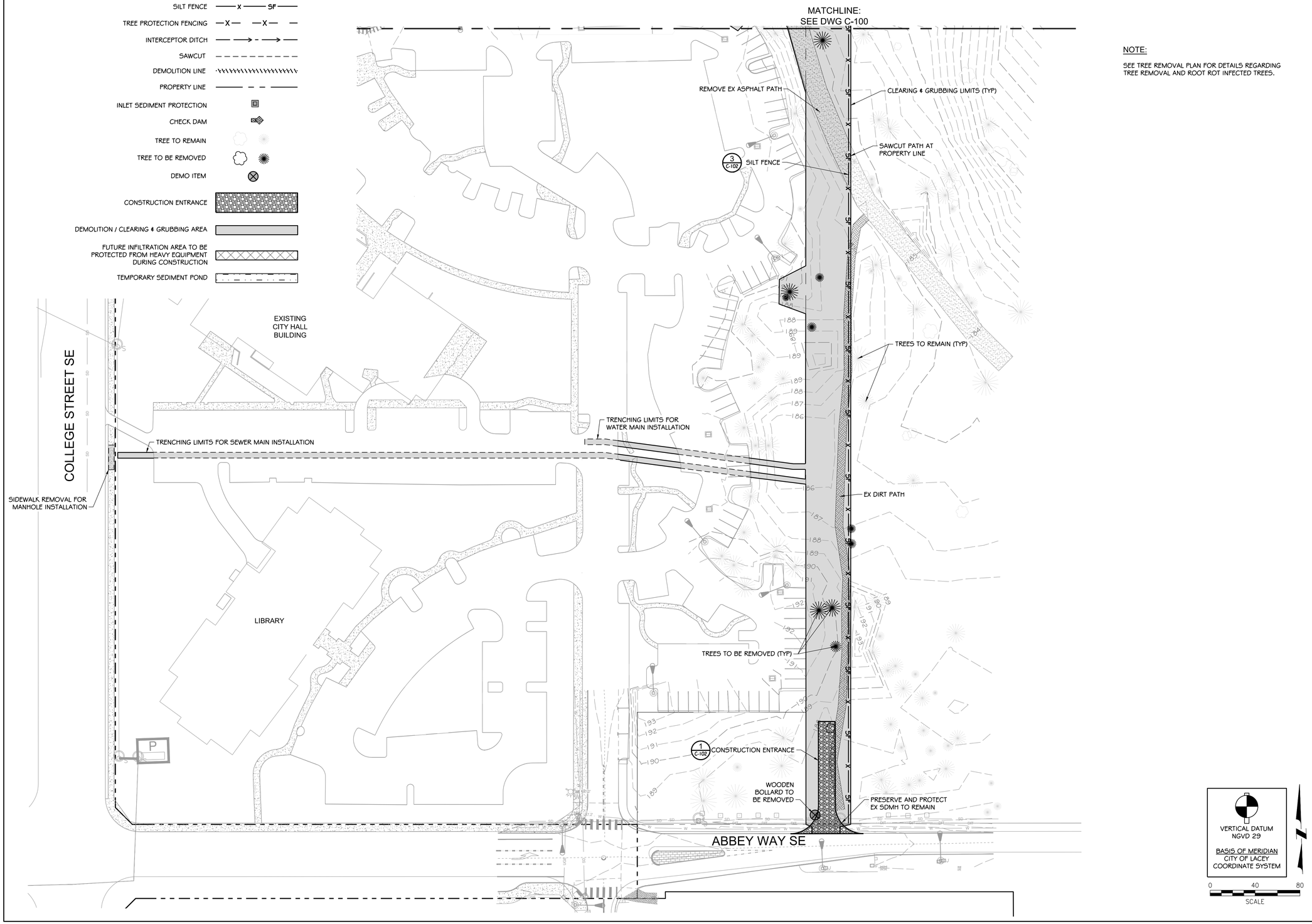

NOTE:

SEE TREE REMOVAL PLAN FOR DETAILS REGARDING TREE REMOVAL AND ROOT ROT INFECTED TREES.

VERTICAL DATUM
NGVD 29

BASIS OF MERIDIAN
CITY OF LACEY
COORDINATE SYSTEM

0 40 80
SCALE

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04/21/2023

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CITY OF LACEY

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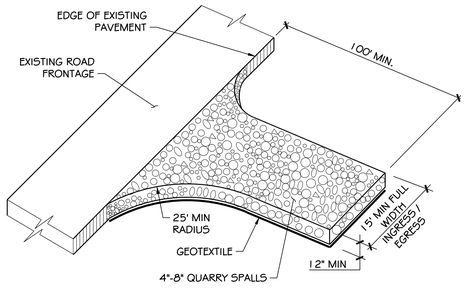
DATE:
04.20.2023

SITE PLAN REVIEW

SHEET NO.
C-101

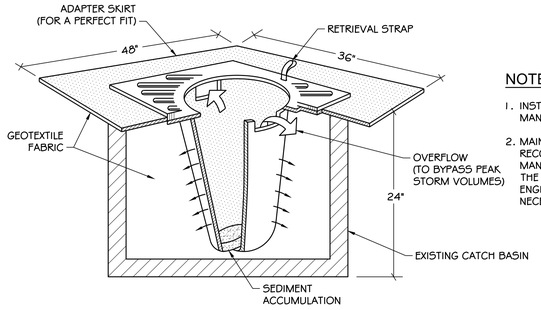
TESC PLAN SOUTH



CONSTRUCTION ENTRANCE NOTES:

1. MATERIAL SHALL BE 4 INCH TO 8 INCH QUARRY SPALLS AND MAY BE TOP-DRESSED WITH 1 INCH TO 3 INCH ROCK. (STATE STANDARD SPECIFICATIONS, SECTION 8-15.)
2. THE ROCK PAD SHALL BE AT LEAST 12 INCHES THICK AND 100 FEET LONG. WIDTH SHALL BE THE FULL WIDTH OF THE VEHICLE INGRESS AND EGRESS AREA.
3. ADDITIONAL ROCK SHALL BE ADDED PERIODICALLY TO MAINTAIN PROPER FUNCTION OF THE PAD.
4. IF THE PAD DOES NOT ADEQUATELY REMOVE THE MUD FROM THE VEHICLE WHEELS, THE WHEELS SHALL BE HOSED OFF BEFORE THE VEHICLE ENTERS A PAVED STREET. THE WASHING SHALL BE DONE ON A AREA COVERED WITH CRUSHED ROCK AND WASH WATER SHALL DRAIN TO A SEDIMENT RETENTION FACILITY OR THROUGH A SILT FENCE.

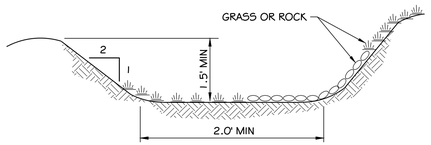
1 CONSTRUCTION ENTRANCE
SCALE: NTS



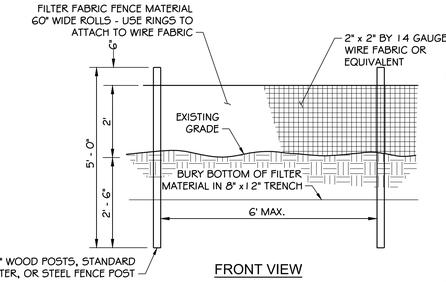
NOTES:

1. INSTALL INSERT PER THE MANUFACTURER'S SPECIFICATIONS.
2. MAINTAIN AND REPLACE INSERTS AS RECOMMENDED BY THE MANUFACTURER, AS REQUIRED BY THE INSPECTOR OR PROJECT ENGINEER, AND AS OTHERWISE NECESSARY.

2 INLET SEDIMENT PROTECTION
SCALE: NTS



4 INTERCEPTOR DITCH
SCALE: NTS



SILT FENCES:

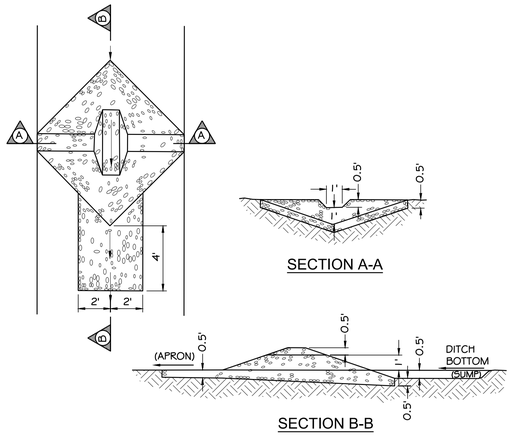
1. FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND SECURELY FASTENED AT BOTH ENDS TO POST.
2. POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 30 INCHES).
3. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 8 INCHES WIDE AND 12 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
4. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
5. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 20 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING IS USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF ABOVE NOTES APPLYING.
7. SILT FENCES SHALL NOT BE REMOVED BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
8. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

3 SILT FENCE
SCALE: NTS

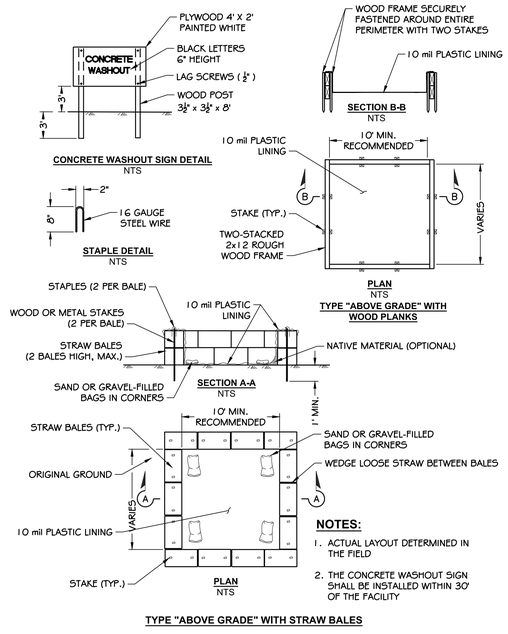
CHECK DAM NOTES:

1. ROCK CHECK DAMS SHALL BE OF 2" TO 8" FACE, SOUND QUARRY ROCK.
2. ROCK CHECK DAMS SHALL BE 1' HIGH IN THE CENTER AND A MINIMUM OF 0.5' HIGHER ON THE SIDES.
3. CHECK DAMS SHALL BE TOED IN AT THE BASE A MINIMUM OF 0.5' TO PREVENT EROSION.
4. CHECK DAMS SHALL BE CONSTRUCTED IN SUCH A MANNER THAT THE ROCK IS FIRMLY PLACED
5. WITH A MINIMUM OF SPACE BETWEEN ROCKS.THE ROCK MUST BE PLACED BY HAND OR MECHANICAL PLACEMENT (NO DUMPING OF ROCK TO FORM DAM.)
6. THE FACES OF THE DAM SHALL BE SMOOTH WITH NO ROCKS PROTRUDING MORE THAN 2".

DITCH SLOPE	CHECK DAM SPACING
0 - 5%	150 FEET
5 - 10%	100 FEET
10%	50 FEET



5 GRAVITY CHECK DAM
SCALE: NTS



6 CONCRETE WASHOUT
SCALE: NTS

EROSION AND SEDIMENT CONTROL NOTES:

1. EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE BEGINNING OF CONSTRUCTION. THE PROJECT ENGINEER SHALL INSPECT AND APPROVE THE INSTALLATION OF EROSION CONTROL MEASURES PRIOR TO BEGINNING CONSTRUCTION.
2. EROSION CONTROL MEASURES ARE NOT LIMITED TO THE ITEMS ON THIS PLAN. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION / LANDSCAPING IS ESTABLISHED. NO SILTATION OF EXISTING OR PROPOSED DRAINAGE FACILITIES SHALL BE ALLOWED. CARE SHALL BE TAKEN TO PREVENT MIGRATION OF SILTS TO OFF-SITE PROPERTIES.
3. THE CONTRACTOR SHALL MAKE DAILY SURVEILLANCE OF ALL EROSION CONTROL MEASURES AND MAKE ANY NECESSARY REPAIRS OR ADDITIONS TO THE EROSION CONTROL MEASURES. THE CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION CONTROL MEASURES AS DETERMINED NECESSARY BY THE INSPECTOR AND / OR THE PROJECT ENGINEER.
4. DURING THE WET SEASON, OCTOBER 1ST TO APRIL 30TH, ALL DISTURBED SOILS SHALL BE STABILIZED WITHIN 48 HOURS AFTER STOP OF WORK. EROSION CONTROL MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, COVERING THE EFFECTED AREA, INCLUDING SPOIL PILES, WITH PLASTIC SHEETING, STRAW MATTING, JUTE MATTING, STRAW MULCH, OR WOOD CHIPS. SEEDING OF THE DISTURBED AREAS SHALL TAKE PLACE AS WEATHER PERMITS.
5. ALL SEEDED OR SODDED AREAS SHALL BE CHECKED REGULARLY TO MAKE SURE VEGETATIVE COVERAGE IS COMPLETE. AREAS SHALL BE REPAIRED, RESEEDED, AND FERTILIZED AS REQUIRED.
6. TRACKING OF SOIL OFF-SITE WILL NOT BE ALLOWED. IF ANY SOIL IS TRACKED ONTO A PUBLIC STREET IT SHALL BE REMOVED BY THE END OF THAT WORKING DAY. ANY FURTHER TRACKING OF MUD WILL THEN BE PREVENTED BY SWEEPING OR WASHING OF THE VEHICLE'S TIRES BEFORE DRIVING ON A PUBLIC STREET.
7. TRENCH DEWATERING DEVICES SHALL BE DISCHARGED IN A MANOR THAT WILL NOT ADVERSELY AFFECT FLOWING STREAMS, DRAINAGE SYSTEMS, OR OFF-SITE PROPERTIES.
8. ALL STORM SEWER INLETS RECEIVING RUNOFF FROM THE PROJECT DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER WILL BE FILTERED BEFORE ENTERING THE CONVEYANCE SYSTEM.
9. ALL OFF-SITE CATCH BASINS IMMEDIATELY ADJACENT TO THE SITE SHALL BE PROTECTED FROM SILTATION.
10. ALL DISTURBED AREAS SHALL BE SEEDED OR SODDED UPON COMPLETION OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT COMPLETE COVERAGE OF THE DISTURBED AREAS IS PROVIDED & THAT GROWTH OF THE VEGETATION IS MAINTAINED.
11. STABILIZED CONSTRUCTION ENTRANCES 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 INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
12. STREET CLEANING SHALL BE PERFORMED AT THE END OF EACH DAY OR MORE OFTEN IF NECESSARY. MATERIAL COLLECTED BY STREET CLEANING SHALL BE DISPOSED OF IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS SECTION 2-03.3(7)C.

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BENJAMIN E. A. ENDELL — STATE OF WASHINGTON — 49448 — REGISTERED PROFESSIONAL ENGINEER
04/21/2023

NEW POLICE STATION
CITY OF LACEY
222 COLLEGE STREET SE, LACEY, WA 98503
CITY PROJECT NO. PW 2022-13

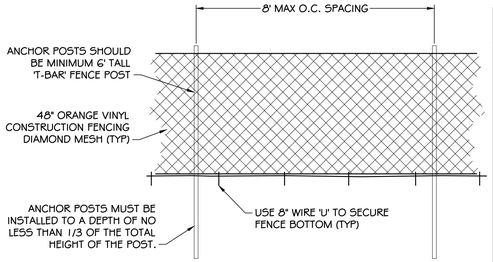
ORIGINAL SHEET SIZE = 24 x 36
HALF SIZE REDUCTIONS = 11 x 17

REVISIONS:

DATE: 04.20.2023
SITE PLAN REVIEW

SHEET NO.
C-102
TESC DETAILS

TREE PROTECTION FENCE NOTES



1. THE TREE PROTECTION FENCE SHOULD BE MAINTAINED THROUGHOUT GRADING AND CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL FINAL LANDSCAPING IS IN PROGRESS. AT NO TIME SHALL EQUIPMENT ENTER INTO THE ROOT PROTECTION ZONE (RPZ). ALL BRUSH CLEANUP WITHIN THE RPZ SHOULD BE COMPLETED BY HAND TO PREVENT DISTURBANCE OF NATIVE GROUND COVERS. NO CUTS OR FILLS OF UTILITY TRENCHING, MODIFICATIONS TO DRAINAGE, ETC. SHALL IMPACT THE RPZ. NO WIRES, CABLES, OR OTHER DEVICES SHOULD BE ATTACHED TO PROTECTED TREES DURING CONSTRUCTION.
2. CONTRACTOR SHALL REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

		TREES IN PLANTING STRIPS	TREES IN TREE PITS
HEAVY EQUIPMENT OPERATION	ROOT PROTECTION	ALL NON-PAVED PLANTING STRIP SURFACES SUBJECT TO IMPACT (COMPACTION) BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED WITH 6"-8"MULCH LAYER OR 3/4" PLYWOOD PANELS PROVIDE WOOD PLANKING OR STEEL PANELS UNDER BACKHOE STABILIZERS PLACED ANYWHERE IN THE PLANTING STRIP ℄ 1-07.16(2)E NO STORAGE OF MATERIALS OR EQUIPMENT IN THE PLANTING STRIP SHALL BE ALLOWED WITHOUT PROPER SURFACE PROTECTION AND WRITTEN AUTHORIZATION FROM WASHINGTON FORESTRY CONSULTANTS.	RETAIN EXISTING PAVING DURING CONSTRUCTION SCHEDULE PAVEMENT REPLACEMENT TO MINIMIZE EXPOSURE OF SURFACE ROOTS TO DRYING, EQUIPMENT DAMAGE, COMPACTION, ETC. EXPOSURE FOR LONGER THAN 48 HOURS REQUIRES MULCH APPLICATION
	CANOPY PROTECTION	OVERHEAD BRANCHING LIKELY TO BE DAMAGED BY EQUIPMENT OPERATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER WITH PREVENTIVE MEASURES (PRUNING OR TIE-BACK OF BRANCHES) APPROVED BY THE WASHINGTON FORESTRY CONSULTANTS AND PROPERLY EXECUTED BEFORE COMMENCEMENT OF THE WORK	
	TRUNK PROTECTION		PROVIDE 5'-0"MIN HEIGHT FENCE INSTALLATIONS FOR EACH TREE TO ENCLOSE ENTIRE TREE PIT OPENING.
SIDEWALK RECONSTRUCTION		MAINTAIN 2'-0" MIN CLEARANCE FROM FLARE OF TRUNK WHEN SETTING FORMS.	PROVIDE 5'-0"X5'-0" OR 4'-0"X6'-0" (24 SQ FT MIN) TREE PITS IN NEW SIDEWALK FOR NEW TREES. TREE PIT SIZE FOR EXISTING TREES SHALL BE ELONGATED (8'-0"TO 12'-0"+). PITS MAY BE REQUIRED TO MINIMIZE ROOT IMPACTS WHILE MAINTAINING REQUIRED SIDEWALK WIDTH
TRENCH OR TUNNELING		SEE STD PLAN NO 133	

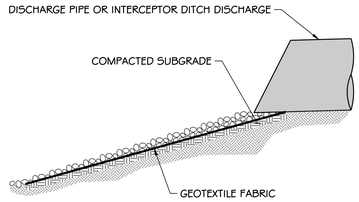
RIP RAP NOTES:

RIP RAP SHALL CONFORM WITH WSDOT STD SPEC SECTION 9-13.1

RIP RAP SHALL BE REASONABLY WELL GRADED ASSORTMENT OF ROCK WITH THE FOLLOWING GRADATION:

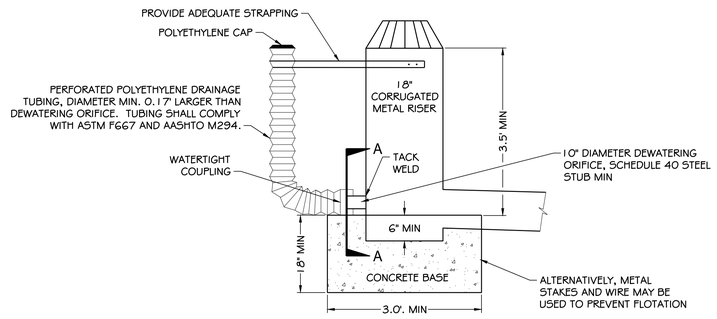
ARMOR SHALL BE A MINIMUM OF 5' EACH SIDE OF OUTFALL.

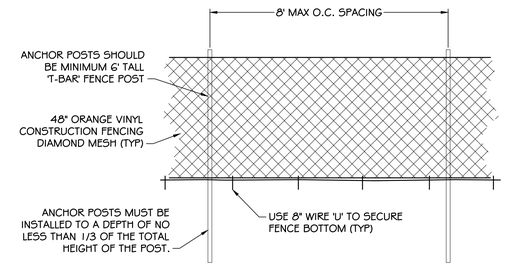
MAXIMUM STONE SIZE = 18"
MEDIAN STONE SIZE = 12"
MINIMUM STONE SIZE = 6"



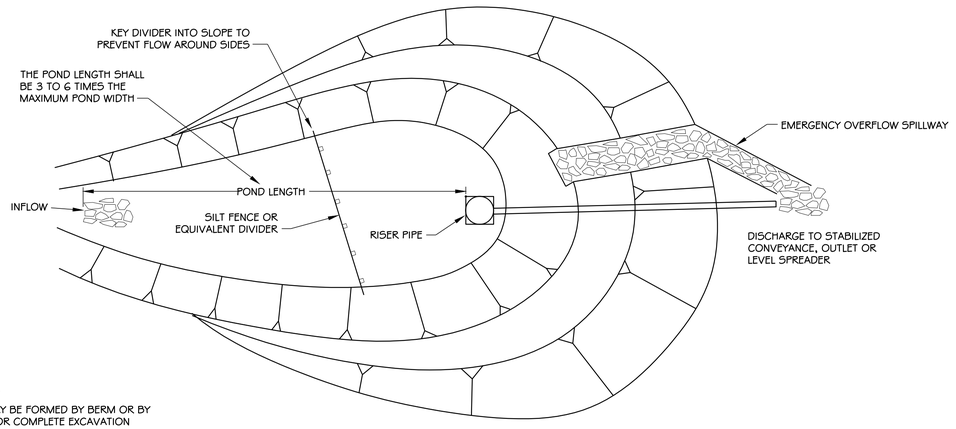
7 TREE PROTECTION FENCING
SCALE: NTS

8 RIP RAP DETAIL
SCALE: NTS



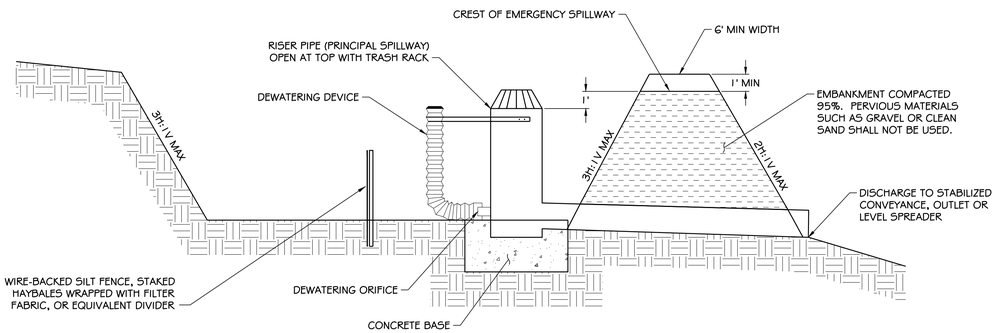


10 HIGH VISIBILITY CONSTRUCTION FENCING
SCALE: NTS



NOTE:

POND MAY BE FORMED BY BERM OR BY PARTIAL OR COMPLETE EXCAVATION



9 TEMPORARY SEDIMENT POND
SCALE: NTS

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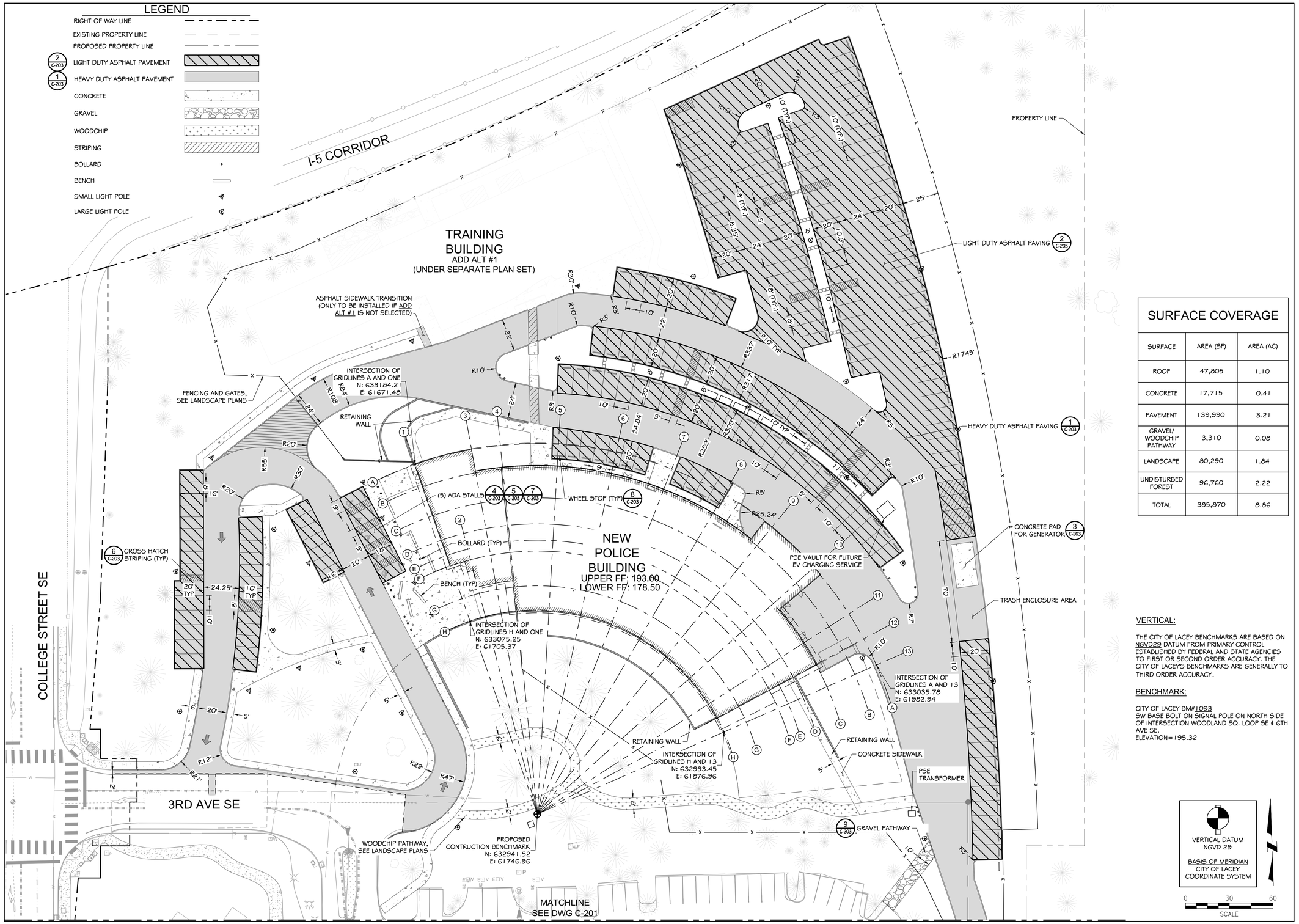
TESC DETAILS



SURFACE COVERAGE

SURFACE	AREA (SF)	AREA (AC)
ROOF	47,805	1.10
CONCRETE	17,715	0.41
PAVEMENT	139,990	3.21
GRAVEL/ WOODCHIP PATHWAY	3,310	0.08
LANDSCAPE	80,290	1.84
UNDISTURBED FOREST	96,760	2.22
TOTAL	385,870	8.86

VERTICAL:

THE CITY OF LACEY BENCHMARKS ARE BASED ON NGVD29 DATUM FROM PRIMARY CONTROL ESTABLISHED BY FEDERAL AND STATE AGENCIES TO FIRST OR SECOND ORDER ACCURACY. THE CITY OF LACEY'S BENCHMARKS ARE GENERALLY TO THIRD ORDER ACCURACY.

BENCHMARK:

CITY OF LACEY BM#1093
SW BASE BOLT ON SIGNAL POLE ON NORTH SIDE OF INTERSECTION WOODLAND SQ. LOOP SE & 6TH AVE SE.
ELEVATION= 195.32

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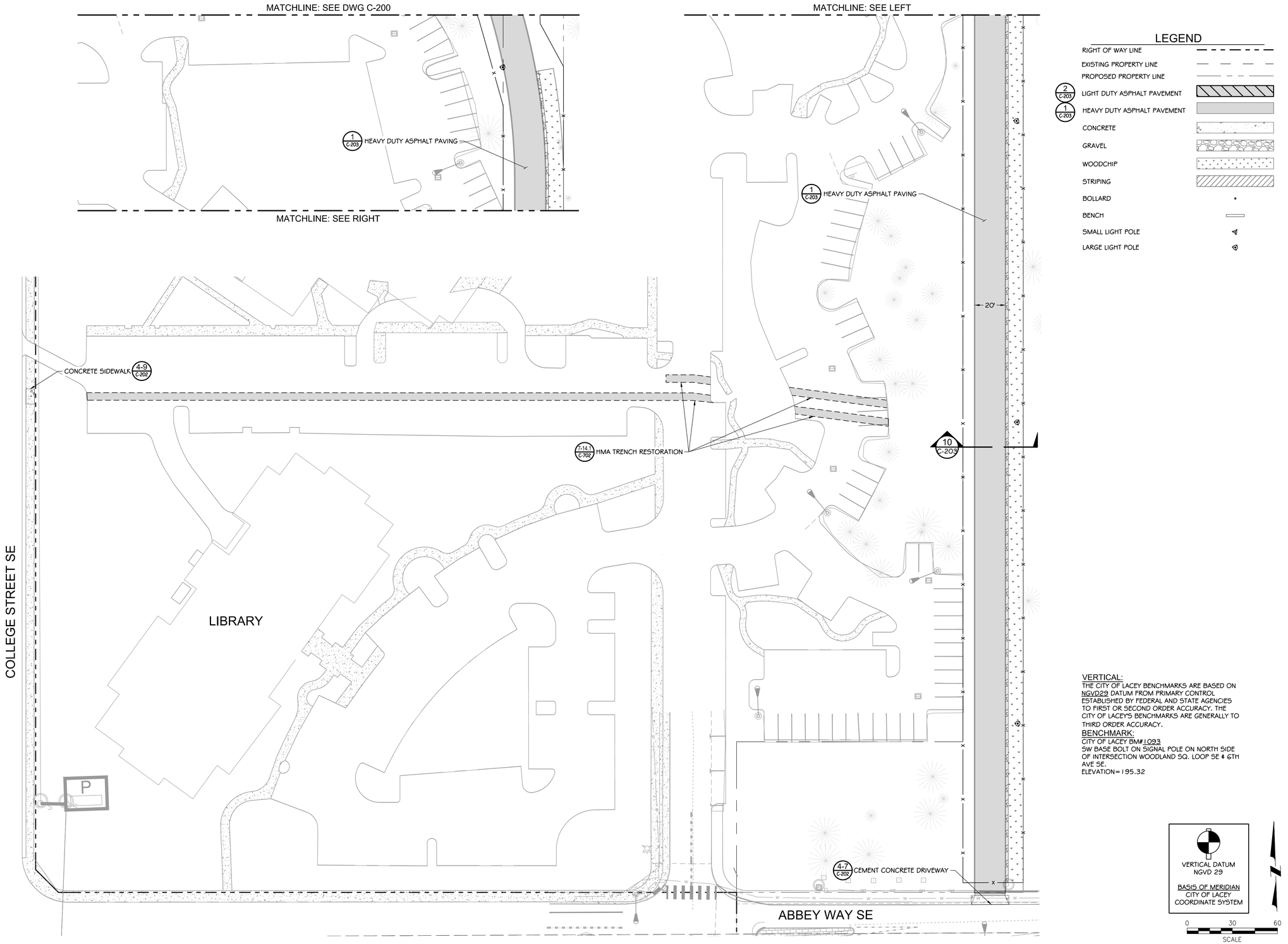
C-200

PAVING & HORIZONTAL CONTROL PLAN NORTH



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ELEVATION= 195.32

VERTICAL DATUM
NGVD 29

BASIS OF MERIDIAN
CITY OF LACEY
COORDINATE SYSTEM

0 30 60
SCALE

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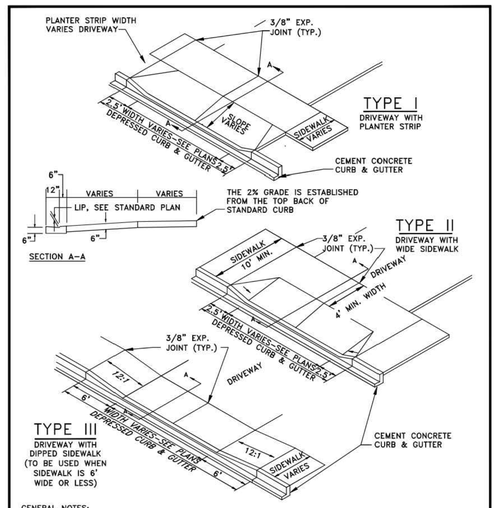
C-201

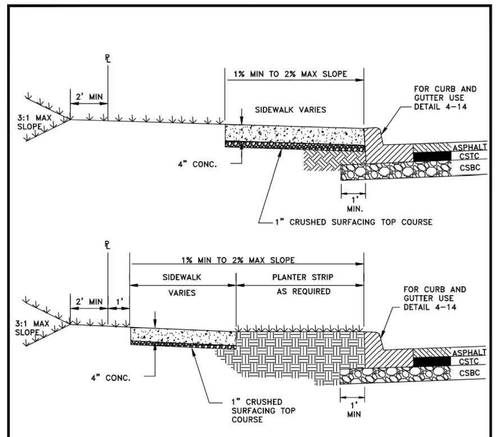
PAVING & HORIZONTAL CONTROL PLAN SOUTH



GENERAL NOTES:
1. FORMS SHALL BE OF WOOD OR METAL AND SHALL EXTEND FOR THE FULL DEPTH OF THE CONCRETE, SEE SECTION 8-14.3(2).
2. ALL FORMS SHALL BE STRAIGHT, FREE FROM WARP AND OF SUFFICIENT STRENGTH TO RESIST THE PRESSURE OF THE CONCRETE WITHOUT SPRING.
3. WHERE D/W EXCEEDS 16' WIDTH A 2" DEEP EXPANSION JOINT SHALL BE PLACED TRANSVERSELY, CENTERED IN WALK.
4. FORM AND SUBGRADE INSPECTION ARE REQUIRED BEFORE POURING CONCRETE.
5. DRIVEWAYS SHALL BE 6" THICK. MIN. SIDEWALK AND DRIVEWAY APRON SHALL BE 6" THICK MIN. THROUGH DRIVEWAY SECTION.
6. SIDEWALK CROSS SLOPE 1% MIN. TO MAX. 2%.

DG4-7.DWG

CITY OF LACEY, WASHINGTON DEPT. OF PUBLIC WORKS			
CEMENT CONCRETE DRIVEWAY			
APPROVED Roger A Schaum CITY ENGINEER			DWG. NO. 4-7
DES. WHO	DWN. WHO	CKD. MAH	DATE 12/15/2014

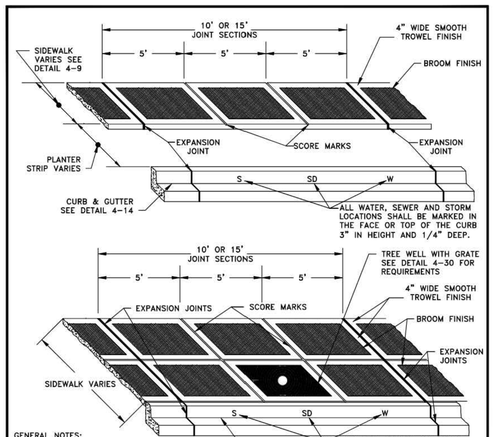


NTS

GENERAL NOTES:
1. FORMS SHALL BE WOOD OR METAL AND SHALL EXTEND FOR THE FULL DEPTH OF THE CONCRETE, SEE SECTION 8-14.3(2).
2. ALL FORMS SHALL BE STRAIGHT, FREE FROM WARP, AND OF SUFFICIENT STRENGTH TO RESIST THE PRESSURE OF THE CONCRETE WITHOUT SPRING.
3. FOR JOINTS AND SCORING SEE DETAIL 4-10.
4. CONCRETE DRIVEWAYS REQUIRE A MINIMUM DEPTH OF 6".
5. SEE ROADWAY SECTIONS FOR STREET TREE LOCATIONS.
6. THE TOP OR TOE OF ALL SLOPES SHALL BEGIN 2' BACK OF THE SIDEWALK OR THE RIGHT-OF-WAY LINE.
7. WHEN APPLICABLE THE RIGHT-OF-WAY LINE SHALL BE 1' BEHIND THE SIDEWALK.

DG4-9.DWG

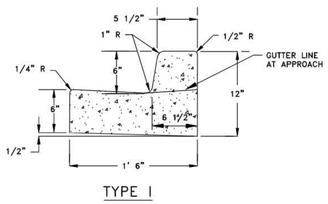
CITY OF LACEY, WASHINGTON DEPT. OF PUBLIC WORKS			
SIDEWALK			
APPROVED Roger A Schaum CITY ENGINEER			DWG. NO. 4-9
DES. WHO	DWN. WHO	CKD. RAS	DATE 12/15/2014



GENERAL NOTES:
1. FORMS SHALL BE WOOD OR METAL AND SHALL EXTEND FOR THE FULL DEPTH OF THE CONCRETE, SEE SECTION 8-14.3(2).
2. ALL FORMS SHALL BE STRAIGHT, FREE FROM WARP AND OF SUFFCIENT STRENGTH TO RESIST THE PRESSURE OF THE CONCRETE WITHOUT SPRING.
3. EXPANSION JOINT MATERIAL TO BE 3/8" THICK PREMOLDED JOINT FILLER FULL THICKNESS OF CONCRETE AND INSTALLED FLUSH OR 1/4" BELOW FINISH GRADE.
4. FORM AND SUBGRADE INSPECTION ARE REQUIRED BEFORE POURING CONCRETE.
5. PLACEMENT OF STREET LIGHTING, TREES, HYDRANTS AND WATER METERS SHALL BE PER THE DETAILS OF ITS PERSPECTIVE SECTIONS.
6. SCORE MARKS SHALL BE 1/8" TO 1/4" WIDE AND A MINIMUM OF 1" DEEP.
7. EXPANSION JOINTS SHALL BE INSTALLED IN THE CURB & GUTTER AND SIDEWALK AT THE PC AND PT FOR ALL CURB RETURNS. EXPANSION JOINTS SHALL BE PLACED IN THE SIDEWALK AT THE SAME LOCATIONS AS THOSE IN THE CURB & GUTTER WHEN THE SIDEWALK IS ADJACENT TO CURB & GUTTER, OR UNLESS OTHERWISE DIRECTED BY THE CITY.

DG4-10.DWG

CITY OF LACEY, WASHINGTON DEPT. OF PUBLIC WORKS			
SIDEWALK SPACING EXPANSION JOINTS & SCORE MARKS			
APPROVED Roger A Schaum CITY ENGINEER			DWG. NO. 4-10
DES. EP	DWN. WHO	CKD. RAS	DATE 12/15/2014

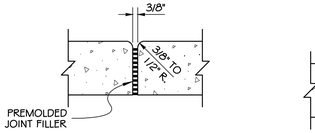


TYPE I

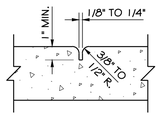
GENERAL NOTES:
1. EXPANSION JOINT MATERIAL TO BE 3/8" THICK PREMOLDED. JOINT FILLER FULL THICKNESS OF CONCRETE SPACING.
2. FORM AND SUBGRADE INSPECTION REQUIRED BEFORE POURING CONCRETE.
3. TYPE I USED ON OUTSIDE LANES.
4. TYPE II USED IN REVERSE SLOPE AREAS.
5. SEE 4B.025 FOR SPECIFICATIONS FOR CURBS AT MEDIANS.

DG4-14.DWG

CITY OF LACEY, WASHINGTON DEPT. OF PUBLIC WORKS			
CEMENT CONCRETE CURB & GUTTER			
APPROVED Roger A Schaum CITY ENGINEER			DWG. NO. 4-14
DES. WHO	DWN. WHO	CKD. MAH	DATE 12/15/2014



EXPANSION JOINT
N.T.S.



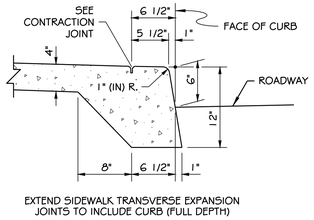
CONTRACTION JOINT
N.T.S.

NOTE:

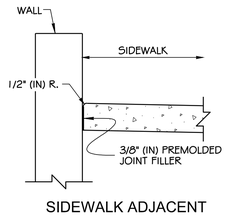
EXPANSION JOINTS SHALL BE PLACED AT MINIMUM THE FOLLOWING LOCATIONS:

1. AT 15' O.C.
2. WHERE NEW SIDEWALK MEETS EXISTING PAVEMENT
3. WHERE SIDEWALK ABUTS PROPOSED BUILDING
4. PERPENDICULAR TO ALL CORNERS OR CHANGES IN SIDEWALK DIRECTION

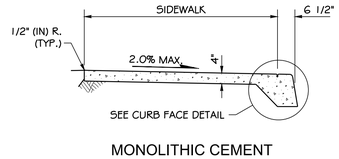
CONTRACTION JOINTS SHALL BE PLACED 5' O.C. BETWEEN EXPANSION JOINTS



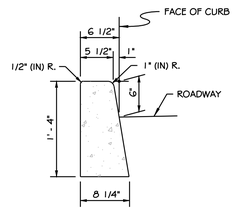
CURB FACE DETAIL
N.T.S.



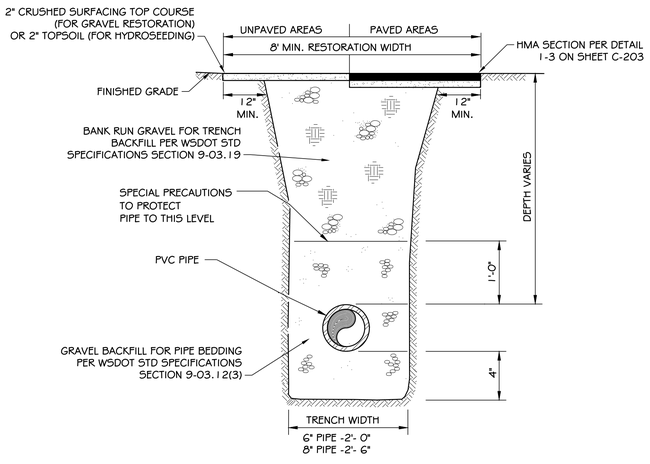
SIDEWALK ADJACENT TO BUILDING DETAIL
N.T.S.



MONOLITHIC CEMENT CONCRETE CURB AND SIDEWALK
N.T.S.



VERTICAL CURB
SCALE: N.T.S



TRENCH RESTORATION
SCALE: N.T.S

1 SITE SIDEWALK DETAILS
SCALE: N.T.S.

2 VERTICAL CURB
SCALE: N.T.S

3 TRENCH RESTORATION
SCALE: N.T.S

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KPFF Project # 10182200044

BENJAMIN E. A. ENDELL — STATE OF WASHINGTON — 49448 — REGISTERED PROFESSIONAL ENGINEER
04/21/2023

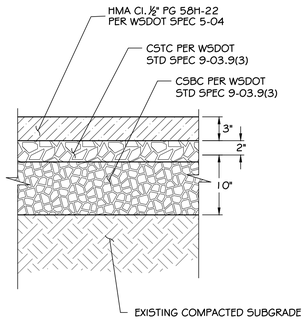
NEW POLICE STATION
CITY OF LACEY
222 COLLEGE STREET SE, LACEY, WA 98503
CITY PROJECT NO. PW 2022-13

ORIGINAL SHEET SIZE = 24 x 36
HALF SIZE REDUCTIONS = 11 x 17

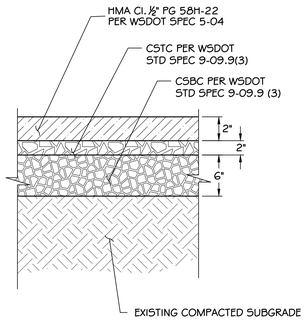
REVISIONS:

DATE: 04.20.2023
SITE PLAN REVIEW

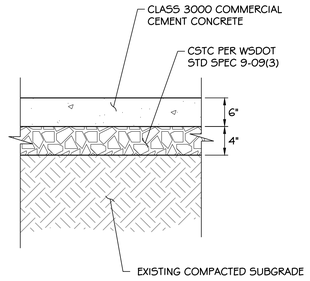
SHEET NO. C-202
SITE DETAILS



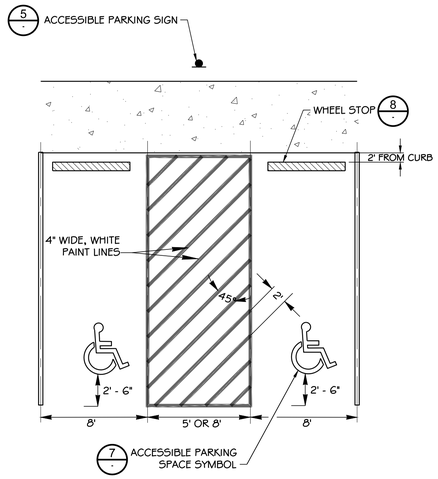
1 HEAVY DUTY ASPHALT PAVING SECTION
SCALE: NTS



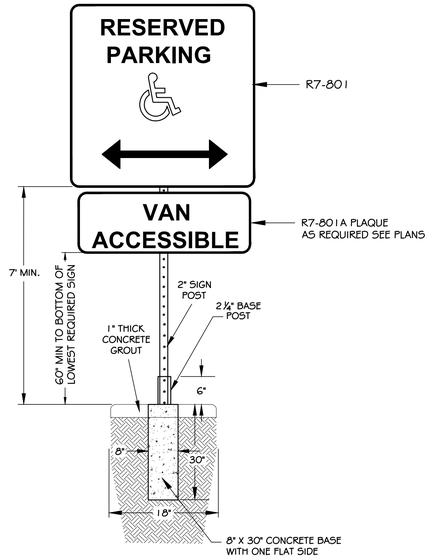
2 LIGHT DUTY ASPHALT PAVING SECTION
SCALE: NTS



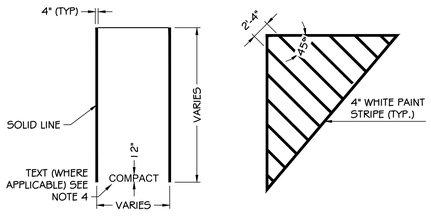
3 CONCRETE SECTION
SCALE: NTS



4 ACCESSIBLE PARKING STRIPING
SCALE: NTS



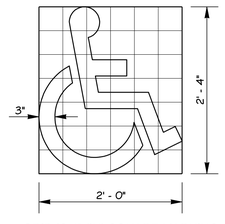
5 ACCESSIBLE PARKING SIGN
SCALE: NTS



NOTES:

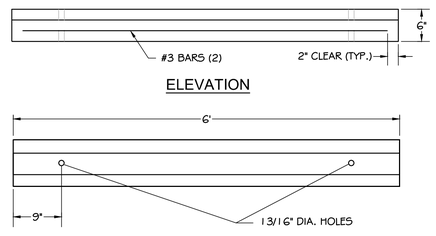
1. PAINT STRIPING TO BE 4" WHITE MARKINGS UNLESS OTHERWISE SPECIFIED
2. TWO APPLICATIONS OF PAINT WILL BE REQUIRED TO COMPLETE ALL PAINTED PAVEMENT MARKINGS. THE SECOND APPLICATION OF PAINT SHALL BE SQUARELY ON TOP OF THE FIRST PASS. THE TIME PERIOD BETWEEN PAINT APPLICATIONS SHALL MEET THE REQUIREMENTS OF WSDOT SECTION 8-22.3(3)E.
3. ALL SURFACES SHALL BE PREPARED IN ACCORDANCE WITH WSDOT STD. SPEC 8-22.3(2)
4. SEE LOCATION FOR COMPACT STALLS PER SITE PLAN. TEXT SHALL BE CENTERED IN PARKING STALL AND ALIGNED WITH BOTTOM OF STALL STRIPING.

6 PAVEMENT MARKING DETAILS
SCALE: NTS

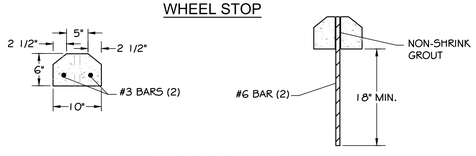


GRID IS 4" (IN) SQUARE MARKING
AREA = 1.41 SQ.FT.

7 ACCESSIBLE PARKING SPACE SYMBOL
SCALE: NTS



WHEEL STOP

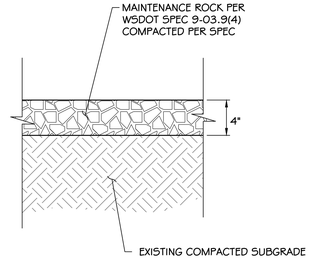


ATTACHMENT DETAIL

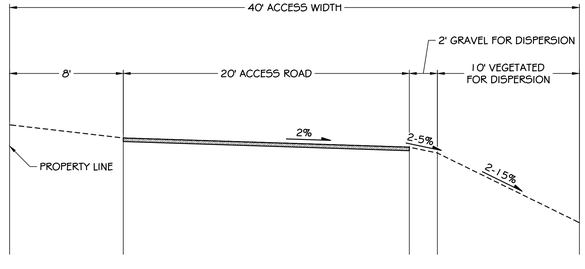
NOTES:

1. THE NON-SHRINK GROUT USED TO ATTACH THE PRECAST CURB SHALL CONSIST OF 3:1 SAND AND CEMENT. GROUT TO A DEPTH OF 1" FROM THE TOP OF THE BUMPER.
2. LOCATIONS FOR WEEPHOLES, AND V-SLOTS SHALL BE IDENTIFIED ON THE DELIVERY ORDER DRAWINGS.
3. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.

8 WHEEL STOP AND ATTACHMENT DETAIL
SCALE: NTS



9 GRAVEL PATHWAY
SCALE: NTS



10 ACCESS ROAD AND DISPERSION SECTION
SCALE: 1" = 5'

KMB architects
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BENJAMIN E. A. ENFIELD — STATE OF WASHINGTON — 49448 — REGISTERED PROFESSIONAL ENGINEER
04/21/2023

NEW POLICE STATION
CITY OF LACEY
222 COLLEGE STREET SE, LACEY, WA 98503
CITY PROJECT NO. PW 2022-13

ORIGINAL SHEET SIZE = 24 x 36
HALF SIZE REDUCTIONS = 11 x 17

REVISIONS:

DATE: 04.20.2023

SITE PLAN REVIEW

SHEET NO.
C-203
SITE DETAILS

LEGEND

- ASPHALT PAVEMENT
- RIGHT OF WAY LINE
- PROPOSED MAJOR CONTOUR — XXX
- PROPOSED MINOR CONTOUR — XXX
- EXISTING MAJOR CONTOUR — XXX
- EXISTING MINOR CONTOUR — XXX
- RIDGE LINE — R R R
- SPOT ELEVATION — 100.00
- LOW POINT SPOT ELEVATION — LP: 100.00
- HIGH POINT SPOT ELEVATION — HP: 100.00
- CUT SLOPE CATCH LINE — CUT
- FILL SLOPE CATCH LINE — FILL

EARTHWORK QUANTITIES

CUT:	14,700 CY
FILL:	15,450 CY
NET:	750 CY (FILL)

NOTE:

QUANTITIES REFLECT SURFACE TO SURFACE COMPARISON. QUANTITIES DO NOT INCLUDE STRIPING, PAVEMENT DEPTH, EXCAVATION FOR UTILITIES OR UNDERGROUND STORM INFILTRATION FACILITY.

I-5 CORRIDOR

TRAINING BUILDING
ADD ALT #1
(UNDER SEPARATE PLAN SET)

INFILTRATION GALLERY AREA

NEW POLICE BUILDING
UPPER FF: 193.00
LOWER FF: 178.50

PLAZA GRADING DETAIL SHEET C-302

LOWER FLOOR WINDOW WELL GRADING DETAIL SHEET C-303

SOUTH WALL GRADING DETAIL SHEET C-303

COLLEGE STREET SE

3RD AVE SE

MATCHLINE: SEE SHEET C-301

VERTICAL DATUM
NGVD 29

BASIS OF MERIDIAN
CITY OF LACEY
COORDINATE SYSTEM

0 30 60
SCALE

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DATE: 04.20.2023

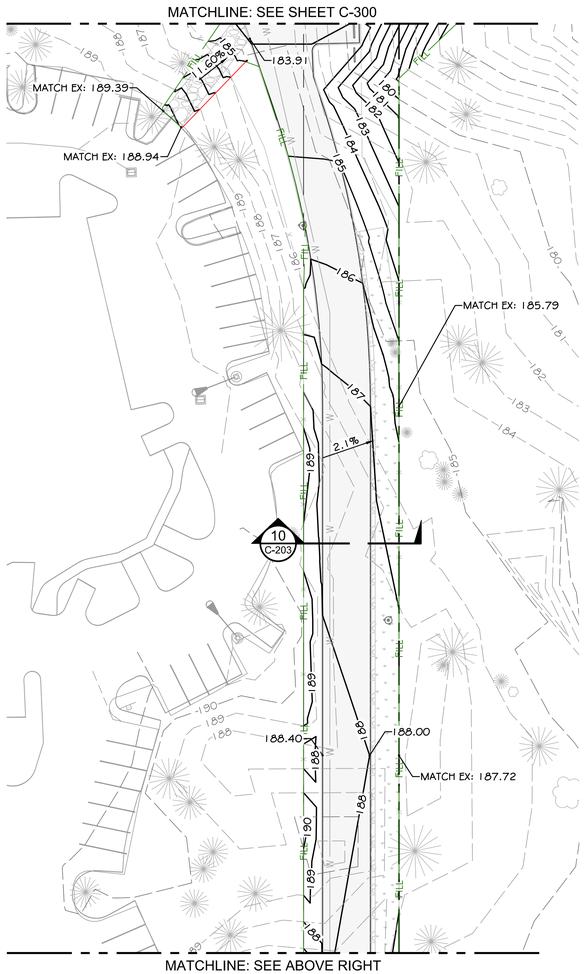
SITE PLAN REVIEW

SHEET NO. **C-300**

GRADING PLAN NORTH

LEGEND

ASPHALT PAVEMENT	
RIGHT OF WAY LINE	
PROPOSED MAJOR CONTOUR	XXX
PROPOSED MINOR CONTOUR	XXX
EXISTING MAJOR CONTOUR	XXX
EXISTING MINOR CONTOUR	XXX
RIDGE LINE	R R R
SPOT ELEVATION	100.00
LOW POINT SPOT ELEVATION	LP: 100.00
HIGH POINT SPOT ELEVATION	HP: 100.00
CUT SLOPE CATCH LINE	CUT
FILL SLOPE CATCH LINE	FILL



VERTICAL DATUM
NGVD 29

BASIS OF MERIDIAN
CITY OF LACEY
COORDINATE SYSTEM

0 30 60
SCALE

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REVISIONS:

DATE:
04.20.2023

SITE PLAN REVIEW

SHEET NO.
C-301

GRADING
PLAN SOUTH

PLAZA GRADING DETAIL
1" = 10'

LEGEND

ASPHALT PAVEMENT	
RIGHT OF WAY LINE	
PROPOSED MAJOR CONTOUR	XXX
PROPOSED MINOR CONTOUR	XXX
EXISTING MAJOR CONTOUR	XXX
EXISTING MINOR CONTOUR	XXX
RIDGE LINE	R R R
SPOT ELEVATION	100.00
TOP OF WALL SPOT ELEVATION	TOW: 100.00
BOTTOM OF WALL SPOT ELEVATION	BOW: 100.00
WALL HEIGHT (TO FINISHED GRADE)	1.6'

0 10 20
SCALE

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04/21/2023

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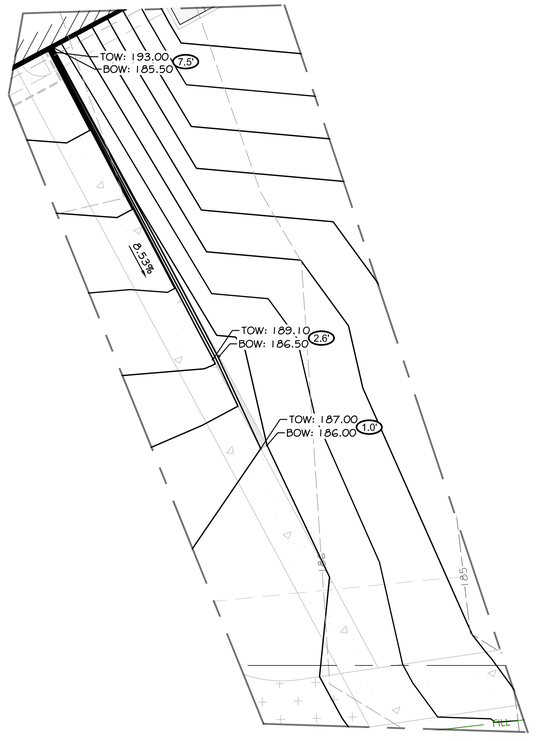
REVISIONS:

DATE:
04.20.2023

SITE PLAN REVIEW

SHEET NO.
C-302

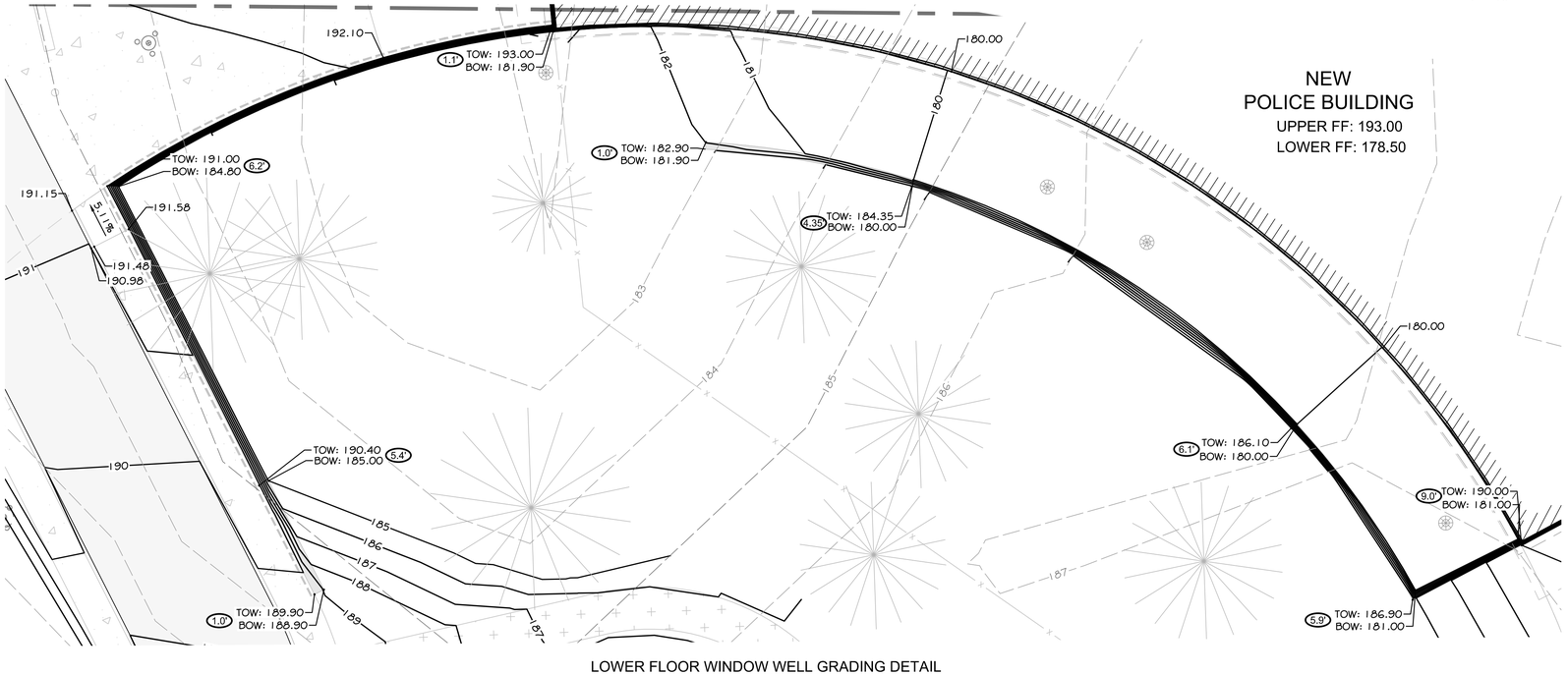
PLAZA GRADING DETAIL



SOUTH WALL GRADING DETAIL
1" = 10'

LEGEND

ASPHALT PAVEMENT	
RIGHT OF WAY LINE	
PROPOSED MAJOR CONTOUR	XXX
PROPOSED MINOR CONTOUR	XXX
EXISTING MAJOR CONTOUR	XXX
EXISTING MINOR CONTOUR	XXX
RIDGE LINE	R R R
SPOT ELEVATION	100.00
TOP OF WALL SPOT ELEVATION	TOW: 100.00
BOTTOM OF WALL SPOT ELEVATION	BOW: 100.00
WALL HEIGHT (TO FINISHED GRADE)	1.6'



LOWER FLOOR WINDOW WELL GRADING DETAIL
1" = 10'

0 10 20
SCALE

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REVISIONS:

DATE:
04.20.2023

SITE PLAN REVIEW

SHEET NO.
C-303

LOWER FLOOR WINDOW WELL GRADING DETAIL

LEGEND

- PROPOSED WATER MAIN — W
- PROPOSED FDC LINE — FDC
- PROPOSED FIRE WATER LINE — FW — FW
- PROPOSED SANITARY SEWER LINE — SS
- PROPOSED SANITARY SEWER FORCE MAIN — FM
- PROPOSED STORM DRAIN — SD
- PROPOSED ROOF DRAIN
- EXISTING WATER MAIN
- EXISTING STORM DRAIN
- EXISTING SEWER MAIN

I-5 CORRIDOR

INFILTRATION FACILITY
STORMTECH SC-740 CHAMBERS
FOOTPRINT = 18,870 SF

STORMWATER DISPERSION TRENCH

1.5" DOMESTIC METER WITH RPBA

6" FIRE LINE

6" FOOTING DRAIN

WATER QUALITY TREATMENT DEVICE

12" SD

6" SS

4" FDC LINE

FDC FOR TRAINING BUILDING

2" DOMESTIC SERVICE LINE

2" DOMESTIC METER

3" DOMESTIC SERVICE LINE

12" DI W

TYPE 1 CB

6" PIV

6" SS

8" SS

6" SEWER CLEANOUT

TYPE 1-48" SEWER MANHOLE

6" DI FIRE LINE

4" DI FDC LINE

PROPOSED FIRE HYDRANT

TYPE 2-48" CB

BACKFLOW PREVENTION AND FIRE RISER INSIDE BUILDING

100 GPM OIL/WATER SEPARATOR

PROPOSED FDC FOR POLICE BUILDING

PROPOSED FIRE HYDRANT

SEWER LIFT STATION

3" SS FORCE MAIN

12" DI W

12" SD

PROPOSED FIRE HYDRANT

1" IRRIGATION METER W/ DCVA

EXISTING FIRE HYDRANT TO BE RELOCATED

CONNECT TO EXISTING 12" WATER MAIN

COLLEGE STREET SE

3RD AVE SE

EXISTING CITY HALL BUILDING

MATCHLINE:
SEE DWG C-401

VERTICAL DATUM
NGVD 29

BASIS OF MERIDIAN
CITY OF LACEY
COORDINATE SYSTEM

0 40 80
SCALE

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KMB Project # 22022

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www.kpff.com

KPFF Project # 10182200044

BENJAMIN E. A. ENDELL — STATE OF WASHINGTON — 49448 — REGISTERED PROFESSIONAL ENGINEER
04/21/2023

NEW POLICE STATION
CITY OF LACEY

222 COLLEGE STREET SE, LACEY, WA 98503
CITY PROJECT NO. PW 2022-13

ORIGINAL SHEET SIZE = 24 x 36
HALF SIZE REDUCTIONS = 11 x 17

REVISIONS:

DATE:
04.20.2023

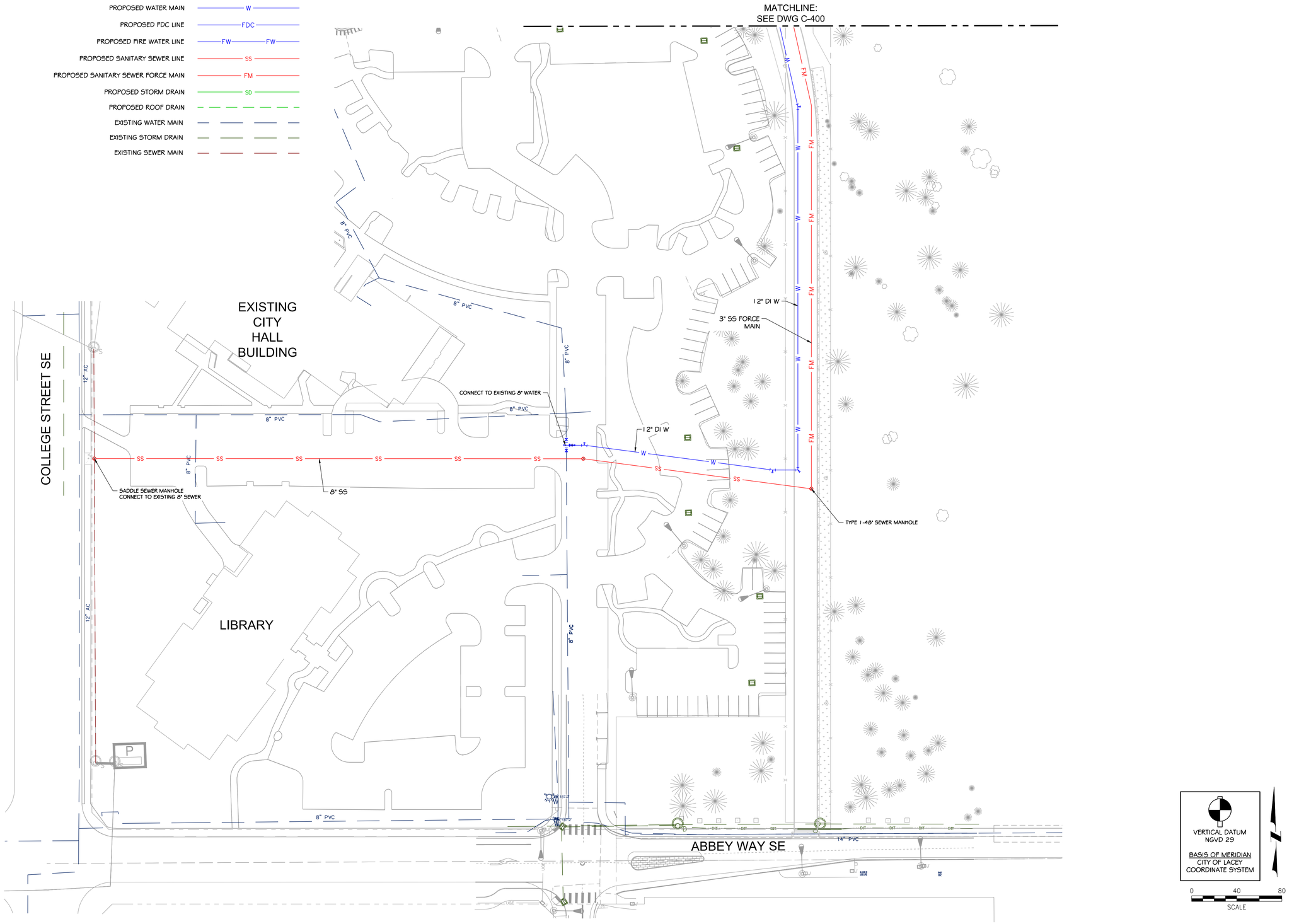
SITE PLAN REVIEW

SHEET NO.
C-400

OVERALL UTILITY PLAN NORTH

LEGEND

- PROPOSED WATER MAIN — W
- PROPOSED FDC LINE — FDC
- PROPOSED FIRE WATER LINE — FW — FW
- PROPOSED SANITARY SEWER LINE — SS
- PROPOSED SANITARY SEWER FORCE MAIN — FM
- PROPOSED STORM DRAIN — SD
- PROPOSED ROOF DRAIN
- EXISTING WATER MAIN
- EXISTING STORM DRAIN
- EXISTING SEWER MAIN



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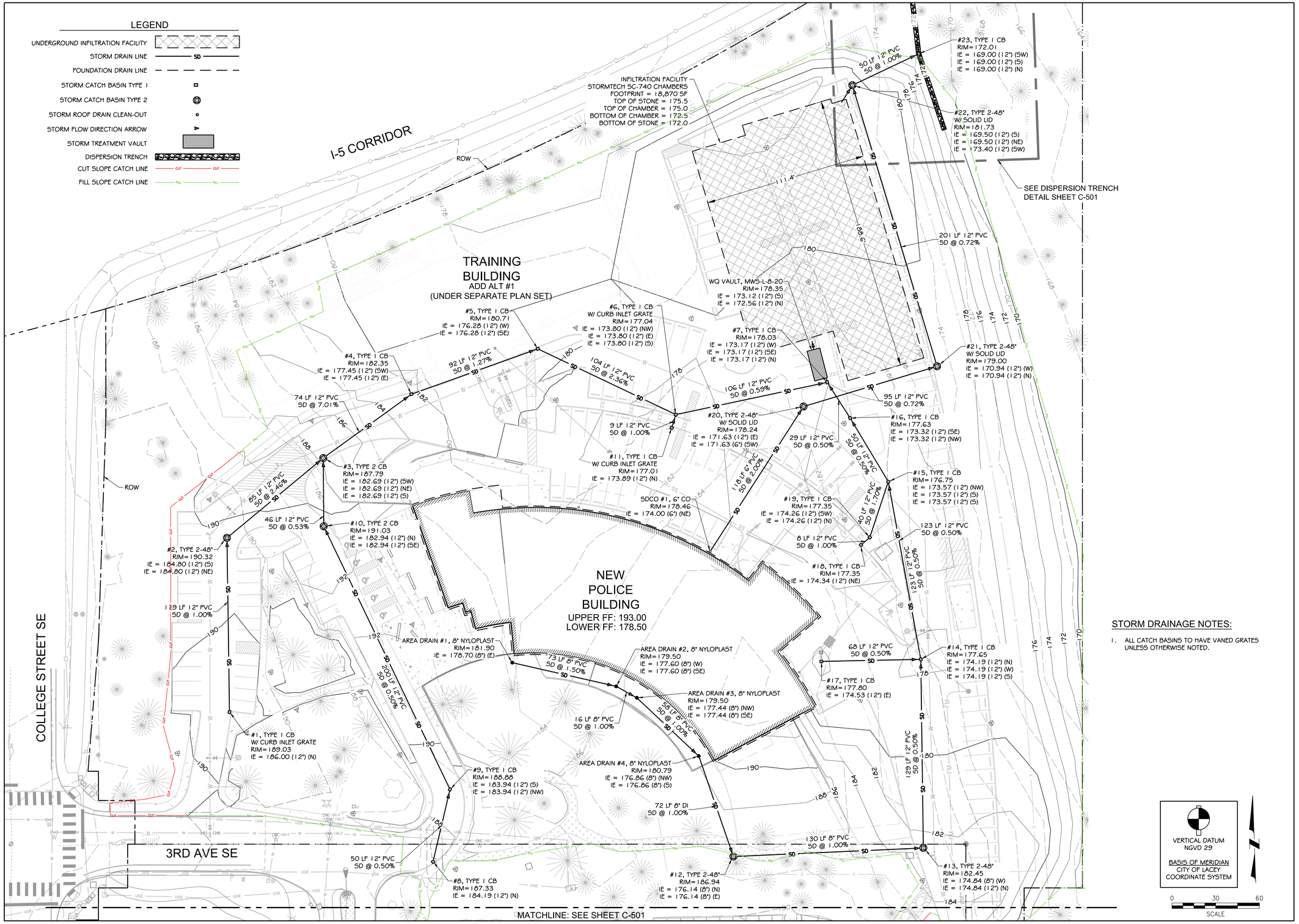
REVISIONS:

DATE:
04.20.2023

SITE PLAN REVIEW

SHEET NO.
C-401

OVERALL
UTILITY PLAN
SOUTH



STORM DRAINAGE NOTES:

1. ALL CATCH BASINS TO HAVE VANED GRATES UNLESS OTHERWISE NOTED.

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04/21/2023

NEW POLICE STATION
CITY OF LACEY
222 COLLEGE STREET SE, LACEY, WA 98503
CITY PROJECT NO. PW 2022-13

ORIGINAL SHEET SIZE = 24 x 36
HALF SIZE REDUCTIONS = 11 x 17

REVISIONS:

DATE:
04.20.2023

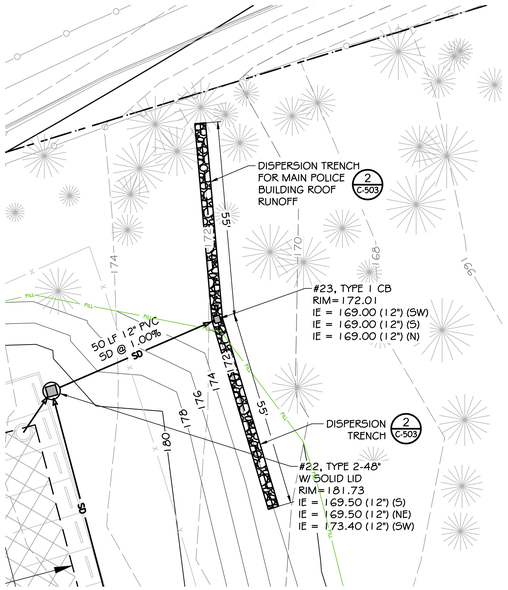
SITE PLAN REVIEW

SHEET NO.
C-500

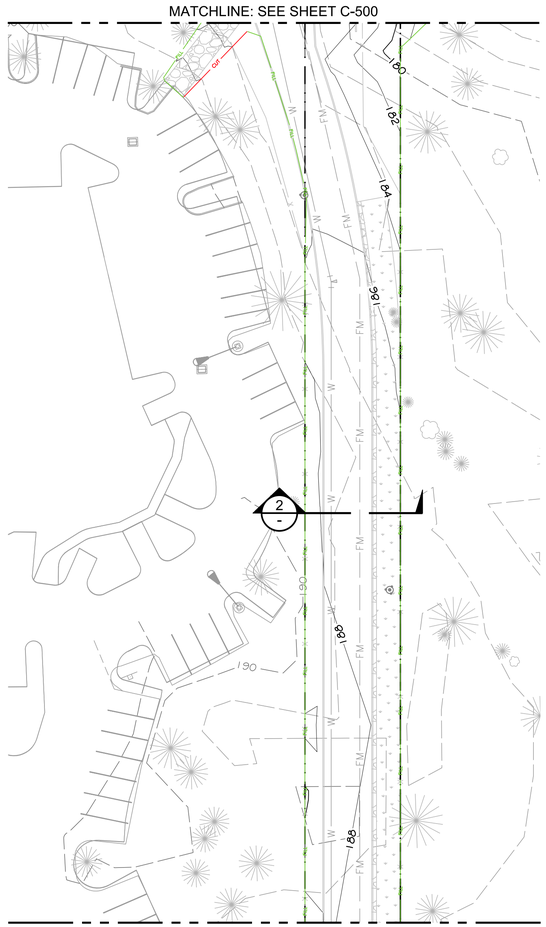
STORM DRAINAGE PLAN NORTH

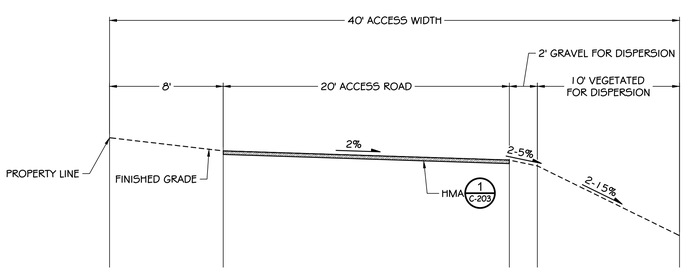
LEGEND

- UNDERGROUND INFILTRATION FACILITY
- STORM DRAIN LINE — SD
- FOUNDATION DRAIN LINE
- STORM CATCH BASIN TYPE 1
- STORM CATCH BASIN TYPE 2
- STORM ROOF DRAIN CLEAN-OUT
- STORM FLOW DIRECTION ARROW
- STORM TREATMENT VAULT
- DISPERSION TRENCH
- CUT SLOPE CATCH LINE — CUT — CUT
- FILL SLOPE CATCH LINE — FILL — FILL



1 DISPERSION TRENCH DETAIL
SCALE: 1" = 20'





2 ACCESS ROAD AND DISPERSION SECTION
SCALE: 1" = 5'

STORM DRAINAGE NOTES:

1. ALL CATCH BASINS TO HAVE VANED GRATES UNLESS OTHERWISE NOTED.

VERTICAL DATUM
NGVD 29

BASIS OF MERIDIAN
CITY OF LACEY
COORDINATE SYSTEM

0 30 60
SCALE

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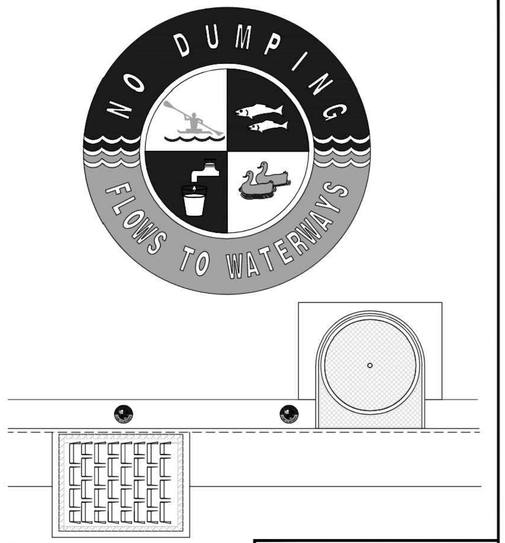
BENJAMIN E. A. ENDELL — STATE OF WASHINGTON — 49448 — REGISTERED PROFESSIONAL ENGINEER
04/21/2023

NEW POLICE STATION
CITY OF LACEY
222 COLLEGE STREET SE, LACEY, WA 98503
CITY PROJECT NO. PW 2022-13

ORIGINAL SHEET SIZE = 24 x 36
HALF SIZE REDUCTIONS = 11 x 17
REVISIONS:

DATE:
04.20.2023
SITE PLAN REVIEW

SHEET NO.
C-501
STORM DRAINAGE PLAN SOUTH



GENERAL NOTES:

1. ALL DECALS SHALL BE DAS #4.0 TUM-FW MANUFACTURER SPECIFIC.
2. DECALS AND DAS CURB MARKER ADHESIVE (#RS-222) SHALL BE PURCHASED AND AFFIXED BY THE CONTRACTOR/DEVELOPER.
3. DECALS SHALL BE ADHERED TO CLEAN, DRY CONCRETE (EXCLUSIVELY WITH SPECIFIED ADHESIVE) A MINIMUM OF 1" FROM EDGE OF CURB.
4. FINISHED PRODUCT SHALL BE INSPECTED AS PART OF THE CITY'S FINAL WALK THROUGH PROCESS.

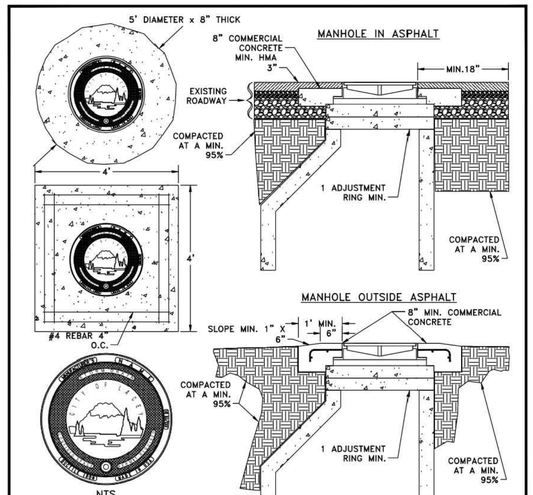
DGS-1.DWG

CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

CATCH BASIN
ANTI-DUMP MESSAGE

APPROVED	DWG. NO.
CITY ENGINEER	5-1

DES.	DWN.	CKD.	DATE
COL	WHO	TW	08/24/2017



NTS

GENERAL NOTES:

1. ALL CONCRETE PADS FOR MANHOLES OUTSIDE THE ASPHALT SHALL HAVE REINFORCING STEEL AS SHOWN ABOVE, REBAR TO MEET ASTM A615 GRADE 60 FY=60,000 P.S.I.
2. ALL MANHOLE FRAME AND COVER ASSEMBLIES SHALL BE EJCO OR OLYMPIC FOUNDRY, WSDOT STYLE #41 WITH THE CITY LOGO STAMPED IN IT, DUCTILE IRON AND MANUFACTURED IN THE U.S.A.
3. ADJUST GRADE RINGS WITH BRICK WEDGES OR GROUT. NO WOOD OR ROCKS SHALL BE USED AS ADJUSTMENT SPACERS.
4. DEVIATION FROM COMPACTION STANDARDS MAY BE APPROVED BY THE DIRECTOR, OR DESIGNEE, WHERE RECOMMENDED BY THE LICENSED PROFESSIONAL ENGINEER FOR PLANNED OR EXISTING INFILTRATION FACILITIES.
5. EXISTING SURFACES PAVED WITH PERMEABLE MATERIALS SHALL BE REPLACED IN-KIND WHERE FEASIBLE IN CONFORMANCE WITH 4B.180 TRENCH BACKFILL AND RESTORATION.

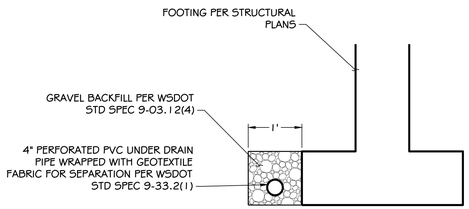
DGS-3.DWG

CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

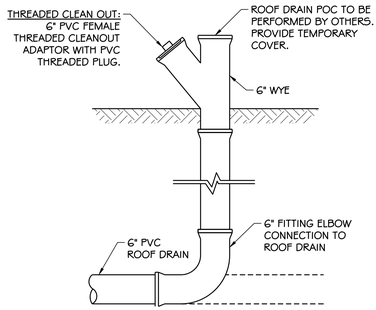
STORM DRAIN MANHOLE
LOGO COVER & FRAME
INSTALLATION

APPROVED	DWG. NO.
CITY ENGINEER	5-3

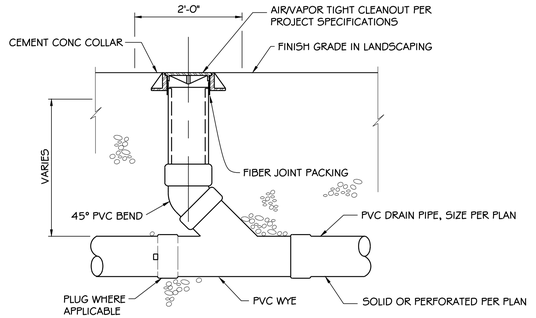
DES	DWN	CKD	DATE
WHO	WHO	RAS	08/24/2017



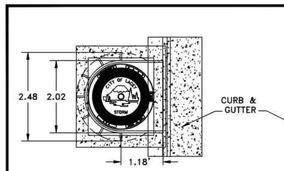
1 FOOTING DRAIN
SCALE: NTS



3 DOWNSPOUT CLEANOUT
SCALE: NTS



2 CLEANOUT
SCALE: NTS



NTS

THE CITY OF LACEY LOGO LIDS SHALL BE USED WHEN AVAILABLE

GENERAL NOTES:

1. CONCRETE PADS FOR ALL CURB INLET BASINS SHALL BE A MINIMUM OF 3' X 3' X 8".
2. ALL STORM MANHOLE LID AND RING ASSEMBLIES SHALL BE EAST JORDAN IRON WORKS OR OLYMPIC FOUNDRY WITH CITY OF LACEY LOGO LIDS WHEN AVAILABLE.
3. ALL STORM MANHOLE LID AND RING ASSEMBLIES SHALL BE DUCTILE IRON AND MANUFACTURED IN THE USA.
4. THIS APPLICATION SHALL BE USED FOR INSTALLATIONS ON ARTERIALS AND BOULEVARDS OR WHEN STORM PIPING IS TOO SHALLOW TO MEET THE MINIMUM 2' OF COVER WHERE THE STORM PIPE ENDS UP IN THE ROADWAY STRUCTURE REGARDLESS OF THE TYPE OF PIPE BEING USED.
5. USE A 2" RECTANGULAR ADJUSTMENT SECTION TURNED LENGTHWISE TO ELIMINATE THE GAP UNDER THE FRAME.
6. DEVIATION FROM THE COMPACTION STANDARDS MAY BE APPROVED BY THE DIRECTOR, OR DESIGNEE, WHERE RECOMMENDED BY THE LICENSED PROFESSIONAL ENGINEER FOR PLANNED OR EXISTING INFILTRATION FACILITIES.

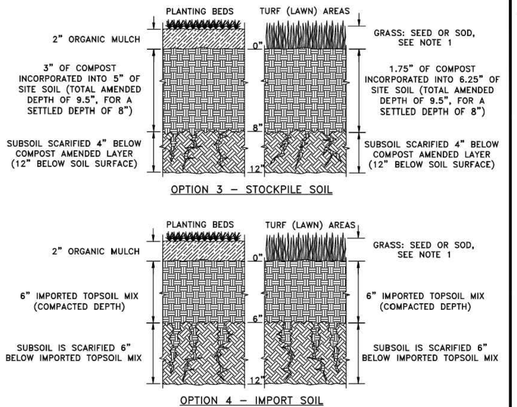
DGS-5.DWG

CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

CURB INLET GRATE &
CATCH BASIN INSTALLATION

APPROVED	DWG. NO.
CITY ENGINEER	5-5

DES	DWN	CKD	DATE
WHO	WHO	RAS	08/24/2017



NOTES:

1. SOIL SHALL BE PLACED 2-INCHES BELOW FINAL GRADE TO ALLOW FOR SOD GROWTH.

GENERAL NOTES:

1. TO MEASURE SETTLED DEPTH, WATER SOIL SUFFICIENTLY TO FULLY SATURATE WITHOUT CAUSING EROSION.
2. COMPOST SHALL MEET SPEC. REQUIREMENTS IN THE 2016 CITY OF LACEY STORMWATER DESIGN MANUAL, TABLE 5.9.
3. COMPACTION OF TOPSOIL (WHERE REQUIRED) TO BE TO 85% (MAX) OF THE MAXIMUM DRY DENSITY PER MODIFIED PROCTOR TEST (ASTM D1557).

DGS-13.1.dwg

CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

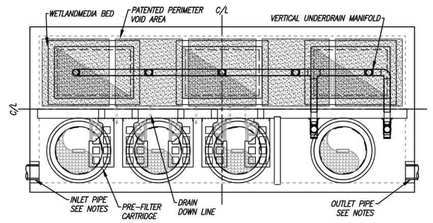
POST CONSTRUCTION SOIL
QUALITY AND DEPTH 2

APPROVED	DWG. NO.
CITY ENGINEER	5-13.1

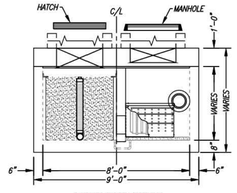
DES	DWN	CKD	DATE
OS	ESM	MMF	08/24/2017

SITE SPECIFIC DATA			
PROJECT NUMBER			
PROJECT NAME			
PROJECT LOCATION			
STRUCTURE ID			
TREATMENT REQUIRED			
FLOW BASED (CFS)			
0.577			
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			OFFLINE
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1			
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE			
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION			
SURFACE LOAD	DIRECT TRAFFIC		
NOTES:			

* PRELIMINARY NOT FOR CONSTRUCTION



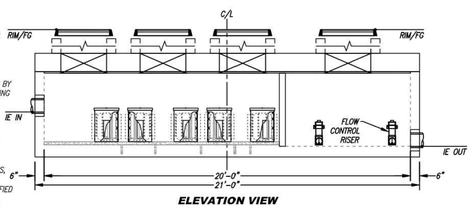
PLAN VIEW



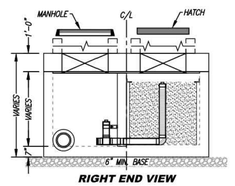
LEFT END VIEW

INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURERS' SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
4. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATERTIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL PIPES, RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO USE GROUT AND/OR BRICKS TO MATCH COVERS WITH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
6. VEGETATION SUPPLIED AND INSTALLED BY OTHERS. ALL UNITS WITH VEGETATION MUST HAVE DRIP OR SPRAY IRRIGATION SUPPLIED AND INSTALLED BY OTHERS.
7. CONTRACTOR RESPONSIBLE FOR CONTACTING CONTECH FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A CONTECH REPRESENTATIVE.



ELEVATION VIEW



RIGHT END VIEW

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT CONTECH.

TREATMENT FLOW (CFS)	0.577
OPERATING HEAD (FT)	3.4
PRETREATMENT LOADING RATE (GPM/SF)	2.0
WETLAND MEDIA LOADING RATE (GPM/SF)	1.0

MWS-L-8-20-V-UG
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

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KPFF Project # 10182200044

BENJAMIN E. A. ENFIELD — STATE OF WASHINGTON — 49448 — REGISTERED PROFESSIONAL ENGINEER
04/21/2023

NEW POLICE STATION
CITY OF LACEY
222 COLLEGE STREET SE, LACEY, WA 98503
CITY PROJECT NO. PW 2022-13

ORIGINAL SHEET SIZE = 24 x 36
HALF SIZE REDUCTIONS = 11 x 17

REVISIONS:

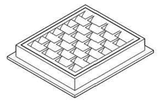
DATE:
04.20.2023

SITE PLAN REVIEW

SHEET NO.
C-502

STORM DRAINAGE DETAILS

DRAWN BY: LISA CYFORD



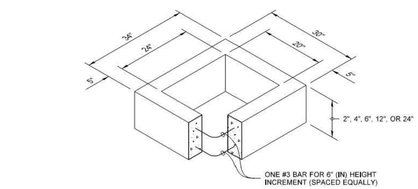
FRAME AND VANED GRATE

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

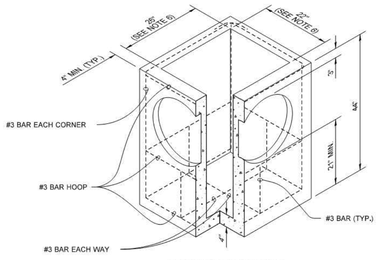
★ CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

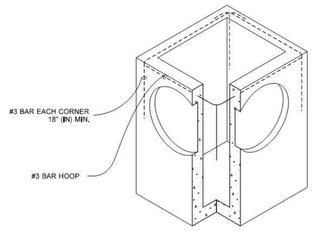
1. As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the ALTERNATIVE **PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
2. The knockout diameter shall not be greater than 20" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) 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 Section 9-04.3**.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
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.
6. 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.



RECTANGULAR ADJUSTMENT SECTION



PRECAST BASE SECTION



(SEE NOTE 1)

ALTERNATIVE PRECAST BASE SECTION

JULIE HEILMAN STATE OF WASHINGTON 41811 REGISTERED PROFESSIONAL ENGINEER

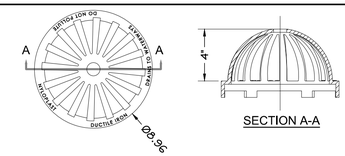
Heilman, Julie
Jan 25 2017 2:53 PM

CATCH BASIN TYPE 1

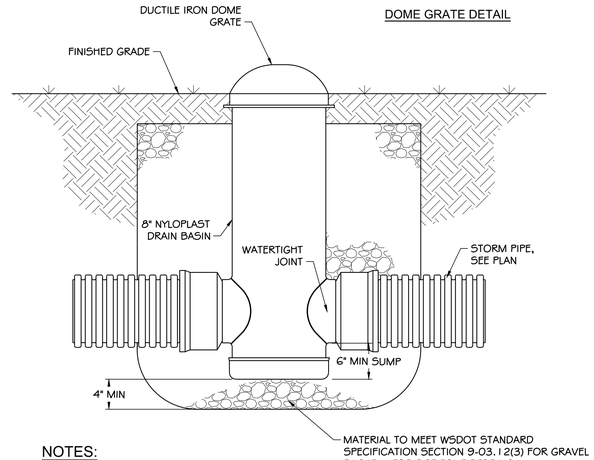
STANDARD PLAN B-5.20-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Carpenter, Jeff
Jan 26 2017 6:48 AM
STATE DESIGN ENGINEER
Washington State Department of Transportation



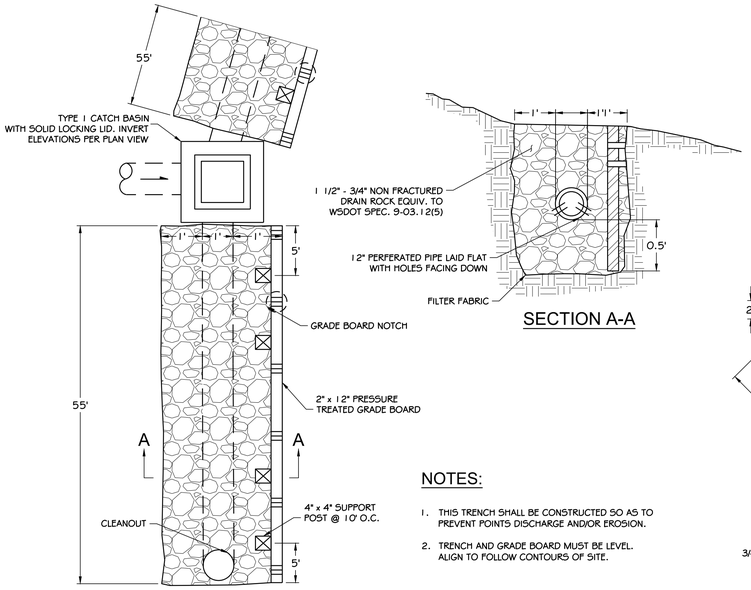
DOME GRATE DETAIL



NOTES:

1. GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/MANCOR DUAL WALL) & PVC SEWER.

1 AREA DRAIN
SCALE: NTS

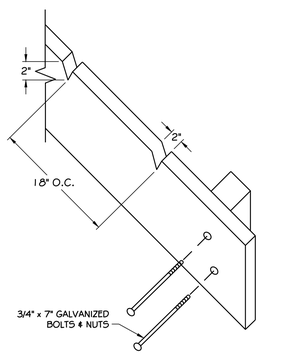


PLAN VIEW

NOTES:

1. THIS TRENCH SHALL BE CONSTRUCTED SO AS TO PREVENT POINTS DISCHARGE AND/OR EROSION.
2. TRENCH AND GRADE BOARD MUST BE LEVEL. ALIGN TO FOLLOW CONTOURS OF SITE.

SECTION A-A



GRADE BOARD WITH NOTCHES

2 DISPERSION TRENCH
SCALE: NTS

CITY OF LACEY GENERAL STORMWATER NOTES:

1. ALL APPROVALS AND PERMITS REQUIRED BY THE CITY OF LACEY SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. A GRADING PERMIT FOR STORM POND CONSTRUCTION MAY BE REQUIRED.
2. STORM DRAIN PIPE MATERIAL SHALL BE ON THE WSDOT QUALIFIED PRODUCTS LIST FOR THE SPECIFICATION LISTED BELOW AND APPROVED BY THE CITY PRIOR TO INSTALLATION:
   A. PLAIN CONCRETE STORM SEWER PIPE OR REINFORCED CONCRETE STORM SEWER PIPE PER WSDOT STANDARD SPECIFICATION 9-05.7.
   B. SOLID WALL PVC STORM SEWER PIPE PER WSDOT STANDARD SPECIFICATION 9-05.12(1).
   C. DUCTILE IRON SEWER PIPE PER WSDOT STANDARD SPECIFICATION 9-05.13.
   D. HANCOR BLUE SEAL ™ AND ADVANCED DRAINAGE SYSTEMS (ADS/HANCOR) N-12 HDPE AND (ADS/HANCOR) SANITITE UP TO 36 INCH IN DIAMETER PER WSDOT STANDARD SPECIFICATIONS 9-05.20 AND 9-05.24.
   E. ADVANCE DRAINAGE SYSTEMS (ADS) CORRUGATED POLYPROPYLINE PIPE (CPEP) FROM 42" TO 60" IN DIAMETER PER WSDOT 9-05.24 (1) FOR USE NOT IN RIGHT OF WAY.
   F. CONTECH DUROMAXX STEEL RIB REINFORCED POLYETHYLENE PIPE, IN DIAMETERS FROM 24 INCH TO 60 INCH PER WSDOT STANDARD SPECIFICATION 9-05.22.
3. ALL STORM DRAINAGE SYSTEMS SHALL BE TESTED PER WSDOT STANDARD SPECIFICATION SECTION 7-04.3. TESTING SHALL BE DONE BY THE CONTRACTOR.
4. TESTING OF THE STORM SEWER SHALL INCLUDE VIDEO RECORDING OF THE MAIN BY THE CONTRACTOR. IMMEDIATELY PRIOR TO VIDEO RECORDING, ENOUGH WATER SHALL BE RUN DOWN THE LINE SO IT COMES OUT THE LOWER CATCH BASIN. A COPY OF THE VIDEO RECORDING SHALL BE SUBMITTED TO THE CITY OF LACEY. ACCEPTANCE OF THE LINE WILL NOT BE MADE UNTIL AFTER THE RECORDING HAS BEEN REVIEWED AND APPROVED BY THE CITY. TESTING SHALL TAKE PLACE AFTER ALL UNDERGROUND UTILITIES ARE INSTALLED AND COMPACTION OF THE ROADWAY SUBGRADE IS COMPLETE.
5. SPECIAL STRUCTURES, OILWATER SEPARATORS, AND OUTLET CONTROLS SHALL BE INSTALLED PER PLANS AND MANUFACTURERS' RECOMMENDATIONS. WHERE OILWATER SEPARATORS ARE CONNECTED TO A SEWER SYSTEM, THEY SHALL BE INSTALLED WITH A P-TRAP OR CHECK VALVE TO PREVENT ODORS.
6. ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH CORE REQUIREMENT 2 OF THE CURRENT CITY OF LACEY STORMWATER DESIGN MANUAL. FOR SITES WHERE VEGETATION HAS BEEN PLANTED THROUGH HYDROSEEDING, THE FINANCIAL GUARANTEE WILL NOT BE RELEASED UNTIL THE VEGETATION HAS BEEN THOROUGHLY ESTABLISHED.
7. WHERE CONNECTIONS REQUIRE "FIELD VERIFICATIONS", CONNECTION POINTS WILL BE EXPOSED BY CONTRACTOR AND FITTINGS VERIFIED 48 HOURS PRIOR TO DISTRIBUTING SHUT-DOWN NOTICES.
8. ALL CATCH BASINS/MANHOLES SHALL HAVE PADS PER LACEY STANDARD DETAIL.
9. ANY CHANGES TO THE DESIGN SHALL FIRST BE REVIEWED AND APPROVED IN WRITING BY THE PROJECT ENGINEER AND THE CITY OF LACEY.
10. ALL STORM PIPE SHALL BE A MINIMUM OF 12-INCH DIAMETER FOR MAINS AND 8-INCH DIAMETER FOR LATERALS CROSSINGS. WHEN PRIVATE STORMWATER (I.E. ROOF, LOT, OR FOOTING DRAINS) CANNOT BE INFILTRATED ON INDIVIDUAL LOTS, THE MINIMUM STANDARD PIPING CONNECTION TO THE PUBLIC SYSTEM SHALL BE 8- INCH PVC. THE 8-INCH MAIN USED FOR CONNECTION SHALL BEGIN AT THE RIGHTOF-WAY. THE CONNECTION TO THE CATCH BASIN OR MANHOLE SHALL BE CORED.

CITY OF LACEY GENERAL STORMWATER NOTES (CONTINUED):

11. ALL STORM MAINS AND STORMWATER TREATMENT AND/OR FLOW CONTROL BMPS/FACILITIES AREAS SHALL BE STAKED FOR GRADE AND ALIGNMENT BY AN ENGINEERING OR SURVEY FIRM LICENSED TO PERFORM SUCH WORK.
12. THE MINIMUM STAKING OF STORM SEWER SYSTEMS SHALL BE AS FOLLOWS:
   A. STAKE LOCATION OF ALL CATCH BASINS, MANHOLES, AND OTHER FIXTURES FOR GRADE AND ALIGNMENT.
   B. STAKE LOCATION, SIZE, AND DEPTH OF STORMWATER TREATMENT AND/OR FLOW CONTROL BMPS/FACILITIES.
   C. STAKE FINISHED GRADE OF ALL STORMWATER FEATURES, INCLUDING BUT NOT LIMITED TO CATCH BASIN/MANHOLE RIM ELEVATIONS, OVERFLOW STRUCTURES, WEIRS, AND INVERT ELEVATIONS OF ALL PIPES IN CATCH BASINS, MANHOLES, AND PIPES THAT DAYLIGHT.
13. PIPE SIZE, SLOPE, COVER, ETC., SHALL BE AS SPECIFIED IN THE CITY OF LACEY DEVELOPMENT GUIDELINES AND PUBLIC WORKS STANDARDS.
14. ALL DRIVEWAY CULVERTS SHALL BE OF SUFFICIENT LENGTH TO PROVIDE A MINIMUM 3:1 SLOPE FROM THE EDGE OF THE DRIVEWAY TO THE BOTTOM OF THE DITCH AT THE CULVERT END. CULVERTS SHALL HAVE BEVELED END SECTIONS TO MATCH THE SIDE SLOPE.
15. IF DRAINAGE OUTLETS (STUB-OUTS) ARE TO BE PROVIDED FOR EACH INDIVIDUAL LOT, THE STUB-OUTS SHALL CONFORM TO THE FOLLOWING:
   A. EACH OUTLET SHALL BE SUITABLY LOCATED AT THE LOWEST ELEVATION ON THE LOT, SO AS TO SERVICE ALL FUTURE ROOF DOWNSPOUTS, 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 STORM WATER CONVEYANCE SYSTEM OR TO AN APPROVED OUTFALL LOCATION.
   B. OUTLETS ON EACH LOT SHALL BE LOCATED WITH A FIVE-FOOT-HIGH, 2-INCH BY 4-INCH STAKE MARKED "STORM" OR "DRAIN." THE STUB-OUT SHALL VISIBLY EXTEND ABOVE SURFACE LEVEL AND BE SECURED TO THE STAKE.
   C. DRAINAGE EASEMENTS ARE REQUIRED FOR DRAINAGE SYSTEMS DESIGNED TO CONVEY FLOWS THROUGH INDIVIDUAL LOTS.
   D. THE DEVELOPER AND/OR CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS OF ALL STUB-OUT CONVEYANCE LINES WITH RESPECT TO THE UTILITIES (E.G., POWER, GAS, TELEPHONE, TELEVISION).
   E. ALL INDIVIDUAL STUB-OUTS SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE LOT HOME OWNER.
16. THE STORM DRAINAGE SYSTEM SHALL BE CONSTRUCTED ACCORDING TO APPROVED PLANS ON FILE WITH THE CITY. ANY MATERIAL DEVIATION FROM THE APPROVED PLANS WILL REQUIRE WRITTEN APPROVAL FROM THE CITY AND SHALL BE CORRECTED IN THE AS-BUILT DRAWINGS.
17. 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 BE AMENDED IN ACCORDANCE WITH THE CURRENT CITY OF LACEY STORMWATER DESIGN MANUAL AND THEN SEEDED, PLANTED, AND MULCHED OR SIMILARLY STABILIZED AFTER CONSTRUCTION TO THE SATISFACTION OF THE CITY. FOR SITES WHERE GRASS HAS BEEN PLANTED THROUGH HYDROSEEDING, THE PERFORMANCE BOND WILL NOT BE RELEASED UNTIL THE GRASS HAS BEEN THOROUGHLY ESTABLISHED, UNLESS OTHERWISE APPROVED BY THE CITY.
18. ALL EROSION CONTROL AND STORMWATER FACILITIES SHALL BE REGULARLY INSPECTED AND MAINTAINED BY THE CONTRACTOR DURING THE CONSTRUCTION PHASE OF THE DEVELOPMENT PROJECT.
19. NO FINAL CUT OR FILL SLOPE SHALL EXCEED 2:1 WITHOUT STABILIZATION BY ROCKERY OR BY A STRUCTURAL RETAINING WALL.
20. THE PROJECT ENGINEER SHALL VERIFY THE LOCATIONS, WIDTHS, THICKNESSES, AND ELEVATIONS OF ALL EXISTING PAVEMENTS AND STRUCTURES, INCLUDING UTILITIES AND OTHER FRONTAGE IMPROVEMENTS, WHICH ARE TO INTERFACE WITH NEW WORK. THE CONTRACTOR SHALL PROVIDE ALL TRIMMING, CUTTING, SAW CUTTING, GRADING, LEVELING, SLOPING, COATING, AND OTHER WORK, INCLUDING MATERIALS AS NECESSARY TO CAUSE THE INTERFACE WITH EXISTING WORKS TO BE PROPER, WITHOUT CONFLICT, ACCEPTABLE TO THE ENGINEER AND THE CITY, COMPLETE IN PLACE, AND READY TO USE.
21. COMPACTION OF ALL FILL AREAS SHALL BE PER CURRENT APWA SPECIFICATIONS. FILL SHALL BE PROVIDED IN 6" MAXIMUM LIFTS AND SHALL BE COMPACTED TO 95 PERCENT OF ITS MAXIMUM RELATIVE DENSITY. DEVIATION FROM THIS STANDARD MAY BE APPROVED BY THE DIRECTOR, OR DESIGNEE, WHERE RECOMMENDED BY THE LICENSED PROFESSIONAL ENGINEER FOR PLANNED OR EXISTING INFILTRATION FACILITIES.

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KPFF Project # 10182200044

BENJAMIN E. A. ENDELMAN STATE OF WASHINGTON 49448 REGISTERED PROFESSIONAL ENGINEER
04/21/2023

NEW POLICE STATION
CITY OF LACEY
222 COLLEGE STREET SE, LACEY, WA 98503
CITY PROJECT NO. PW 2022-13

ORIGINAL SHEET SIZE = 24 x 36
HALF SIZE REDUCTIONS = 11 x 17

REVISIONS:

DATE: 04.20.2023

SITE PLAN REVIEW

SHEET NO.
C-503
STORM DRAINAGE DETAILS

Advanced Drainage Systems, Inc.

SiteAssist™ FOR STORMTECH INSTALLATION INSTRUCTIONS VISIT OUR APP

SC-740 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT/7%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED, UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM

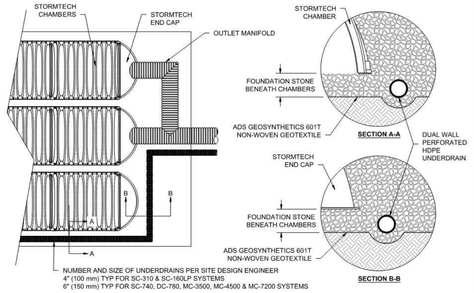
1. STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

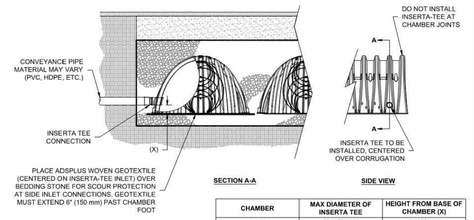
1. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



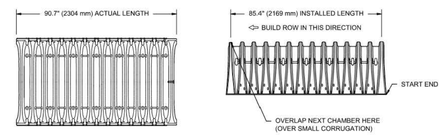
5 UNDERDRAIN DETAIL



NOTES:
- PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.
- CONTACT ADS ENGINEERING SERVICES IF INSERTA TEE INLET MUST BE RAISED AS NOT ALL INVERTS ARE POSSIBLE.

CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)
MC-7200	12" (300 mm)	8" (200 mm)
INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON		

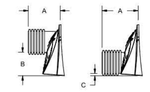
6 INSERTA-TEE SIDE INLET DETAIL



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 30.0" X 85.4"	(1295 mm X 762 mm X 2169 mm)
CHAMBER STORAGE	45.9 CUBIC FEET	(1.30 m³)
MINIMUM INSTALLED STORAGE*	74.9 CUBIC FEET	(2.12 m³)
WEIGHT	75.0 lbs.	(33.6 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS



PRE-FAB STUB AT BOTTOM OF END CAP WITH FLAMP END WITH "BR"
PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
PRE-CORED END CAPS END WITH "PC"

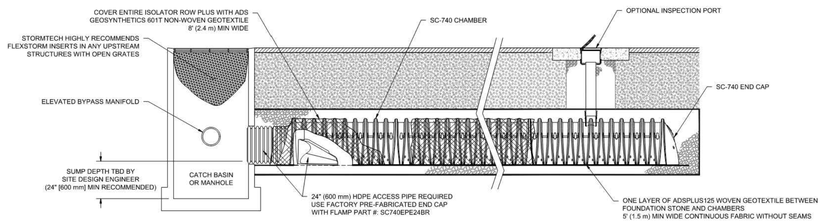
PART #	STUB	A	B	C
SC740EPE06T / SC740EPE06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	---
SC740EPE06B / SC740EPE06BPC			---	0.5" (13 mm)
SC740EPE08T /SC740EPE08TPC	8" (200 mm)	12.2" (310 mm)	16.5" (419 mm)	---
SC740EPE08B / SC740EPE08BPC			---	0.6" (15 mm)
SC740EPE10T / SC740EPE10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	---
SC740EPE10B / SC740EPE10BPC			---	0.7" (18 mm)
SC740EPE12T / SC740EPE12TPC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	---
SC740EPE12B / SC740EPE12BPC			---	1.2" (30 mm)
SC740EPE15T / SC740EPE15TPC	15" (375 mm)	18.4" (467 mm)	9.0" (229 mm)	---
SC740EPE15B / SC740EPE15BPC			---	1.3" (33 mm)
SC740EPE18T / SC740EPE18TPC	18" (450 mm)	19.7" (500 mm)	5.0" (127 mm)	---
SC740EPE18B / SC740EPE18BPC			---	1.6" (41 mm)
SC740EPE24B*	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)
SC740EPE24BR*	24" (600 mm)	18.5" (470 mm)	---	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE24B/SC740EPE24BR ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

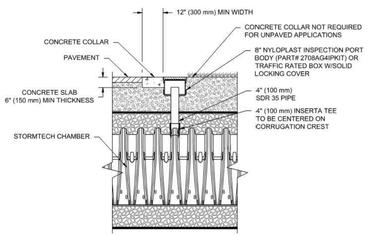
* FOR THE SC740EPE24B/SC740EPE24BR THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

2 SC-740 TECHNICAL SPECIFICATIONS



3 SC-740 ISOLATOR ROW PLUS DETAIL



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

4 4" PVC INSPECTION PORT DETAIL (SC SERIES CHAMBER)

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

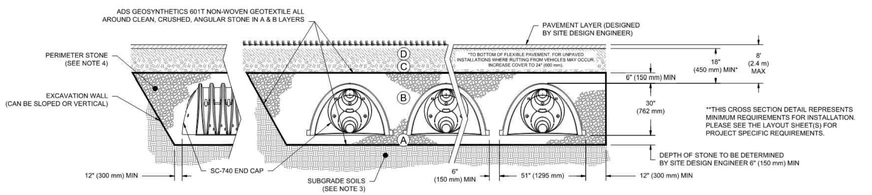
NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145* A-1, A-2-4, A-3 OR AASHTO M43* 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43* 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43* 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT/7%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

1 SC-740 CROSS SECTION DETAIL

DRAWN: | DATE:
REVIEWED: | PROJECT NO:
REV: | NOT TO SCALE

SC-740 STANDARD DETAILS

ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON REFERENCED STANDARDS. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. UNLESS THE PLANS ARE SIGNED AND SEALED BY THE SITE DESIGN ENGINEER, THE SITE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION AND SEALING THE DOCUMENT. IT IS THE SITE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEET'S OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

StormTech® Chamber System
888-892-2694 | WWW.STORMTECH.COM

4640 TRUEMAN BLVD
HILLIARD, OH 43026

Advanced Drainage Systems, Inc.

SHEET

KMB architects
906 Columbia Street SW, Suite 400
Olympia, Washington 98501
360.352.8883

KMB Project # 22022

kpff
612 Woodland Square Loop, Suite 100
Lacey, WA 98503
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www.kpff.com

KPFF Project # 10182200044

BENJAMIN E. A. ENDELL — STATE OF WASHINGTON — 49448 — REGISTERED PROFESSIONAL ENGINEER
04/21/2023

NEW POLICE STATION
CITY OF LACEY
222 COLLEGE STREET SE, LACEY, WA 98503
CITY PROJECT NO. PW 2022-13

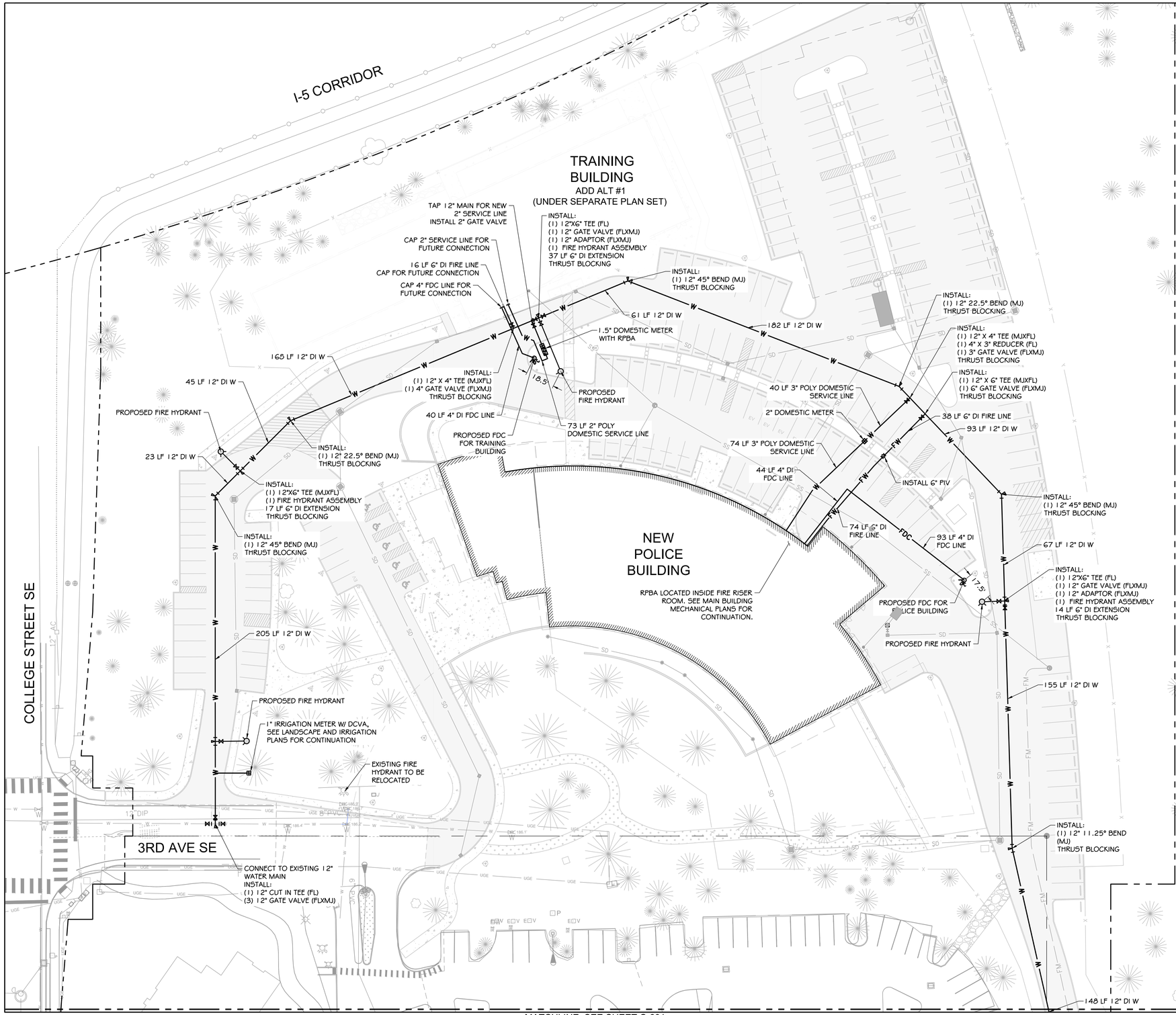
ORIGINAL SHEET SIZE = 24 x 36
HALF SIZE REDUCTIONS = 11 x 17

REVISIONS:

DATE: 04.20.2023

SITE PLAN REVIEW

SHEET NO.
C-504
STORM DRAINAGE DETAILS



LEGEND

- WATER LINE — W
- FDC LINE — FDC
- FIRE LINE — FW
- WATER GATE VALVE
- WATER PIPE BEND W/ THRUST BLOCKING (ANGLES VARY)
- WATER TEE W/ THRUST BLOCKING
- WATER CAP
- WATER CHECK VALVE
- FIRE HYDRANT ASSEMBLY
- FDC HYDRANT
- WATER METER (SINGLE)

VERTICAL DATUM NGVD 29

BASIS OF MERIDIAN CITY OF LACEY COORDINATE SYSTEM

0 30 60
SCALE

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04/21/2023

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DATE: 04.20.2023

SITE PLAN REVIEW

SHEET NO.
C-600
WATER PLAN NORTH

MATCHLINE: SEE SHEET C-600

EXISTING CITY HALL BUILDING

EXISTING POLICE BUILDING

LIBRARY

6" PVC

8" PVC

12" AC

INSTALL:
(1) 12" 11.25° BEND (MJ)
THRUST BLOCKING

323 LF 12" DI W

16 LF 12" DI W

SAWCUT AND PAVEMENT RESTORATION OF EXISTING PARKING LOT FOR WATER MAIN INSTALLATION, SEE PAVING PLAN FOR MORE DETAIL.

169 LF 12" DI W

INSTALL:
(1) 12" 90° BEND (MJ)
THRUST BLOCKING

23 LF 12" DI W

CONNECT TO EXISTING 8" WATER MAIN
INSTALL:
(1) 8" CUT IN TEE (FL)
(2) 8" GATE VALVE (FLXMJ)
(1) 8" GATE VALVE (FL)
(1) 12" X 8" REDUCER (MJXFL))
THRUST BLOCKING

INSTALL:
(1) 12" 11.25° BEND (MJ)
THRUST BLOCKING

INSTALL:
(1) 12" 11.25° BEND (MJ)
THRUST BLOCKING

LEGEND

WATER LINE	W
FDC LINE	FDC
FIRE LINE	FW
WATER GATE VALVE	
WATER PIPE BEND W/ THRUST BLOCKING (ANGLES VARY)	
WATER TEE W/ THRUST BLOCKING	
WATER CAP	
WATER CHECK VALVE	
FIRE HYDRANT ASSEMBLY	
FDC HYDRANT	
WATER METER (SINGLE)	

VERTICAL DATUM
NGVD 29

BASIS OF MERIDIAN
CITY OF LACEY
COORDINATE SYSTEM

0 30 60
SCALE

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04/21/2023

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CITY OF LACEY
222 COLLEGE STREET SE, LACEY, WA 98503
CITY PROJECT NO. PW 2022-13

ORIGINAL SHEET SIZE = 24 x 36
HALF SIZE REDUCTIONS = 11 x 17

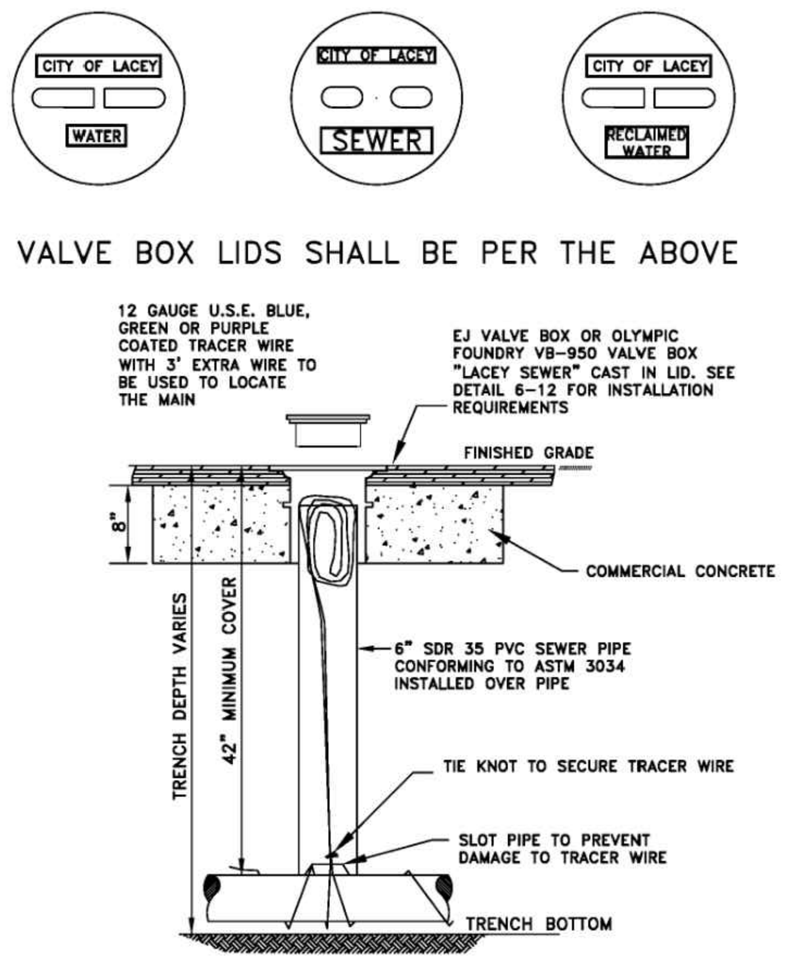
REVISIONS:

DATE:
04.20.2023

SITE PLAN REVIEW

SHEET NO.
C-601

WATER PLAN
SOUTH



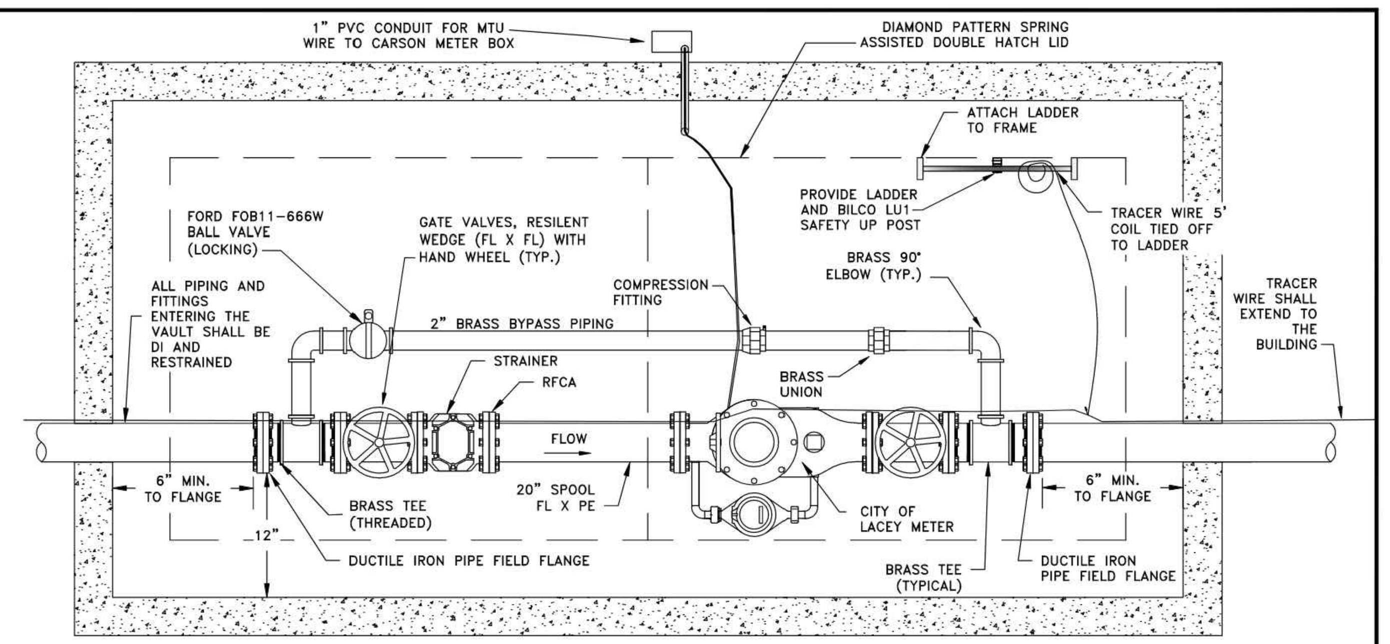
GENERAL NOTE:
1. TRACER WIRE ACCESS PORT SHALL BE INSTALLED EVERY 500 FEET WHEN NO APPURTENANCES ARE CONNECTED TO IT.

CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

TRACER WIRE ACCESS PORT VALVE BOX INSTALLATION

APPROVED / CITY ENGINEER			DWG. NO. 3-11
DES	DWN	CKD	DATE
WHO	WHO	RAS	12/15/2014

DG3-11.DWG



GENERAL NOTES:
1. A MINIMUM OF 10 PIPE DIAMETERS OF STRAIGHT UNOBSTRUCTED PIPE SHALL BE REQUIRED UPSTREAM OF THE METER.
2. THE METER VAULT SHALL BE SIZED PROPERLY TO MEET MINIMUM PIPING CLEARANCE REQUIREMENTS.
3. THE CONCRETE METER VAULT SHALL BE BEDDED WITH 6" OF CRUSHED ROCK. THE INSTALLATION SHALL BE LEVEL AND SET TO MATCH FINAL GRADE.
4. THE CONCRETE METER VAULT AND LID SHALL BE DESIGNED FOR H-20 LOADING. THE HATCHES SHALL BE DIAMOND PLATE ALUMINUM STYLE, L.W. PRODUCTS, BILCO OR A PRE-APPROVED EQUAL AND SHALL HAVE ALL 316 STAINLESS STEEL HARDWARE. THE HATCHES SHALL HAVE A SLAM LOCK HASP AND WEATHER PROTECTED PAD LOCK COVER.
5. THE METER VAULT SHALL BE PROVIDED WITH A DRAIN AND THE FINAL INSTALLATION SHALL DRAIN PROPERLY.
6. THE BYPASS PIPING ARE NOT REQUIRED FOR IRRIGATION ONLY INSTALLATIONS.
7. ALL PIPING SHALL BE A MINIMUM OF 12" ABOVE VAULT FLOOR AND BE SUPPORTED BY ADJUSTABLE JACK STANDS. THE STANDS SHALL BE PLACED IN FOUR LOCATIONS TO PROVIDE FIRM SUPPORT.
8. ALL BYPASS PIPE AND FITTINGS SHALL BE 2" DOMESTIC BRASS MEETING LOW LEAD REQUIREMENTS.
9. THE TOP OF THE METER AND VALVE WHEELS SHALL BE MINIMUM 12" BELOW THE LID.
10. A HOLE SHALL BE DRILLED IN THE VAULT WALL 12" DOWN FROM THE LID FOR A 1" PVC ELECTRICAL CONDUIT TO A REMOTE READER BOX PLACED NO MORE THAN 3' AWAY FROM THE VAULT. THE REMOTE METER BOX SHALL BE A CHRISTY FL 30T. THE CONDUIT PENETRATION SHALL BE GROUTED.
11. THE VAULT SHALL BE INSTALLED IN A PLANTER OR IN A PLANTER ISLAND AND SHALL NOT BE ALLOWED IN ANY DRIVING SURFACE. WHEN PLANS ARE ALTERED A PLANTER ISLAND SHALL BE CREATED TO INSTALL THE VAULT IN.

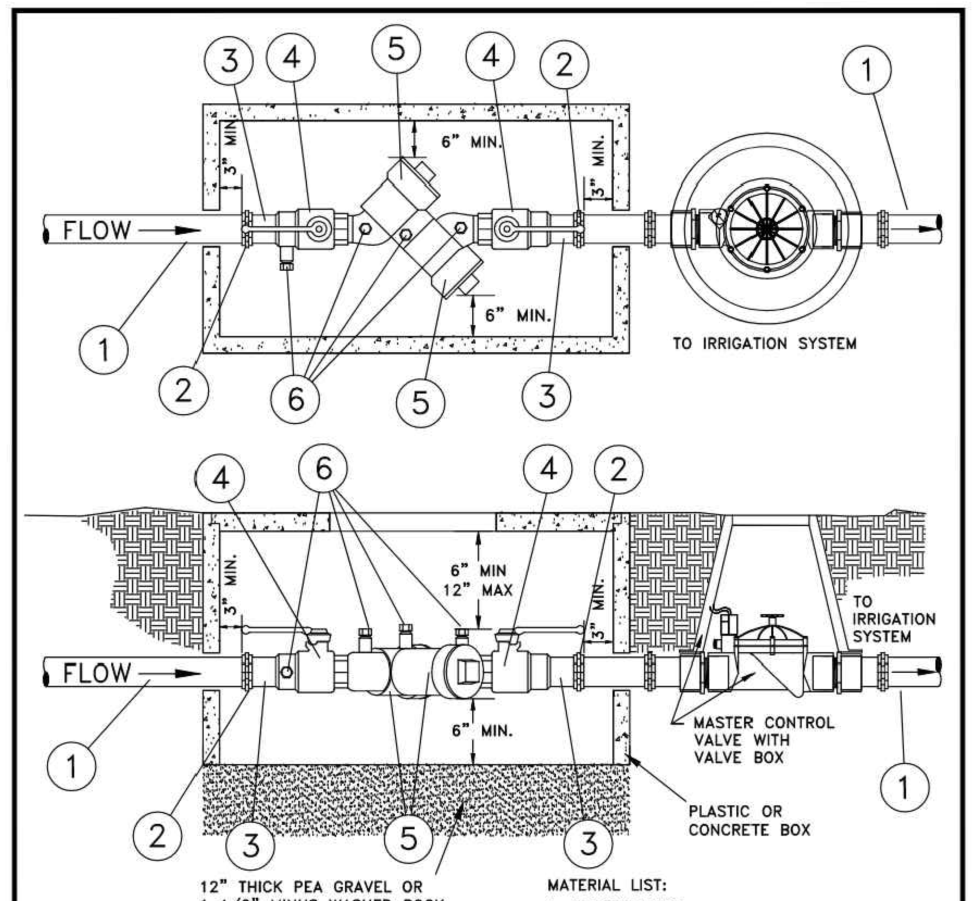
METER AND STRAINER LAY LENGTHS	
3" COMPOUND	17 "
3" TURBINE (IRRIGATION)	12 "
3" STRAINER	6 "
4" COMPOUND	20 "
4" TURBINE (IRRIGATION)	14 "
4" STRAINER	7.5 "

CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

STANDARD PLUMBING CONFIGURATION FOR 3" & 4" METERS

APPROVED / CITY ENGINEER			DWG. NO. 6-3.2
DES	DWN	CKD	DATE
EBK	EBK	RAS	08/24/2017

DG6-3.2.DWG



MATERIAL LIST:
1. SERVICE LINE
2. UNION
3. NIPPLE
4. SHUT-OFF VALVE
5. CHECK VALVE (D.S.H.S. APPROVED)
6. TEST COCKS

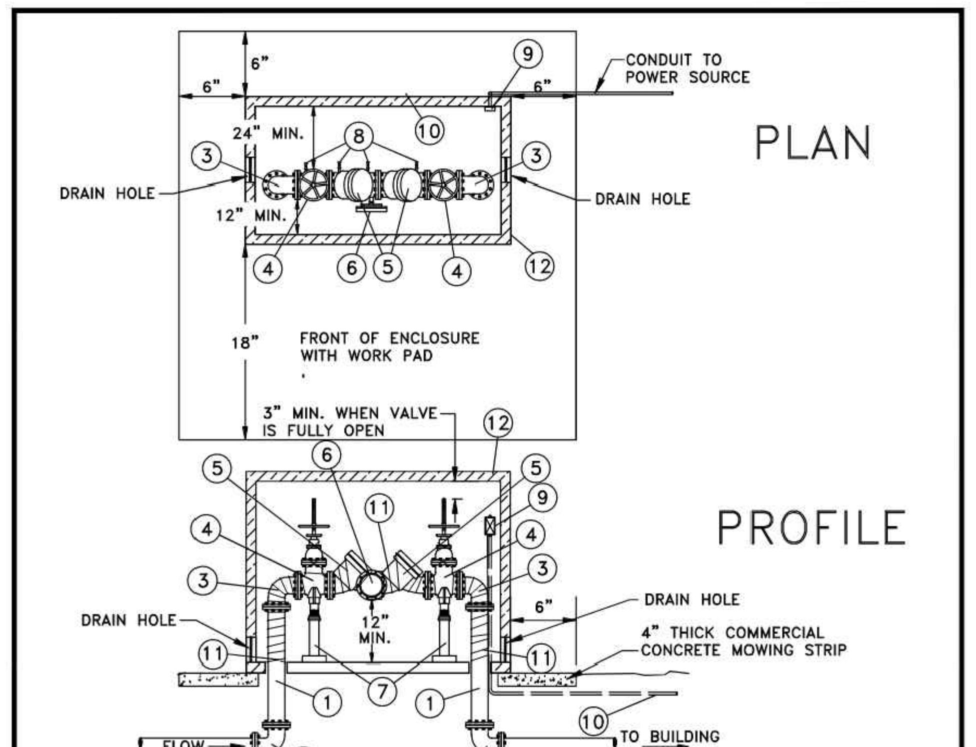
GENERAL NOTES:
1. REFER TO THE CITY OF LACEY DEVELOPMENT GUIDELINES AND PUBLIC WORKS STANDARDS, SECTION 6.110, BACK-FLOW PREVENTION, FOR SELECTION AND INSTALLATION DETAILS.
2. THE BPA INSTALLATION SHALL BE INSPECTED AND APPROVED BY A CITY OF LACEY CROSS-CONNECTION CONTROL SPECIALIST (CCS), PRIOR TO TESTING.
3. WHEN THE INSTALLATION HAS BEEN APPROVED BY THE LACEY CCS, THE DCVA MUST PASS A FUNCTIONALITY TEST BY A WASHINGTON STATE CERTIFIED BAT AS PER DOH STANDARDS
4. SEE DETAIL FOR TYPICAL LAYOUT.
5. A MASTER CONTROL VALVE WITH UNIONS ON BOTH SIDES SHALL BE INSTALLED WITHIN 5' OF THE DCVA ON PUBLIC WORKS PROJECTS.

CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

DOUBLE CHECK VALVE ASSEMBLY FOR 2" OR SMALLER IRRIGATION

APPROVED / CITY ENGINEER			DWG. NO. 6-4.1
DES.	DWN.	CKD.	DATE
CM	WHO	RAS	08/24/2017

DG6-4.1.DWG



MATERIAL LIST:
1. PVC C900 OR CLASS 52 D.I. WALL PIPE FL X FL
2. 90° BEND FL X MEGALUG
3. 90° BEND FL X FL
4. OS&Y GATE VALVE W/HANDWHEEL FL X FL
5. D.S.H.S. APPROVED CHECK VALVE FL X FL
6. RELIEF VALVE FL
7. SUPPORT STANDS
8. TEST COCKS – 4 REQUIRED
9. JUNCTION BOX
10. POWER SOURCE CONDUIT
11. HEAT TAPE
12. HEATED HOT BOX ENCLOSURE

GENERAL NOTES:
1. REFER TO THE CITY OF LACEY DEVELOPMENT GUIDELINES AND PUBLIC WORKS STANDARDS, SECTION 6.110, BACKFLOW PREVENTION, FOR SELECTION AND INSTALLATION DETAILS.
2. THE BPA (BACKFLOW PREVENTION ASSEMBLY) INSTALLATION SHALL BE INSPECTED AND APPROVED BY A CITY OF LACEY CROSS-CONNECTION CONTROL SPECIALIST (CCS), PRIOR TO TESTING.
3. WHEN THE INSTALLATION HAS BEEN APPROVED BY THE LACEY CCS, THE RPBA MUST PASS A FUNCTIONALITY TEST BY A WASHINGTON STATE CERTIFIED BAT AS PER DOH STANDARDS. DOCUMENTATION OF TESTING MUST BE SUBMITTED TO THE LACEY PUBLIC WORKS DEPARTMENT.
4. DRAIN HOLES SHALL BE 1.5 TIMES THE DIAMETER OF THE SERVICE LINE AND INCLUDE SCREENING.
5. ALL RPBA SHALL BE INSTALLED IN A HOT BOX EQUIPPED WITH ELECTRICAL COMPONENTS (CONDUITS, WIRING, J-BOX) AND POWER SUPPLIED BY OWNER.
6. DO NOT INSTALL IN AREAS SUBJECT TO FLOODING.
7. ALL IRRIGATION LINES UP TO THE FIRST VALVE ON THE RPBA SHALL BE DISINFECTED, PRESSURE TESTED, FLUSHED AND TESTED FOR PURITY PER THE CITY OF LACEY STANDARDS.
8. PVC PIPE AND FITTINGS SHALL NOT BE ALLOWED.

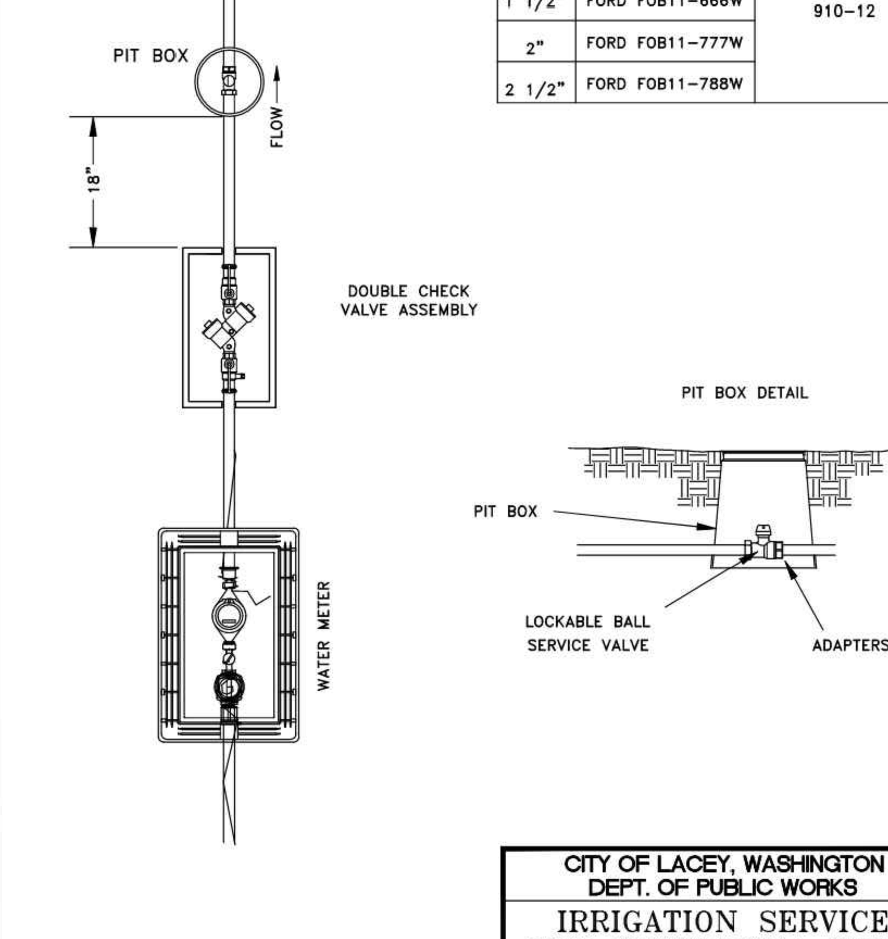
CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

REDUCED PRESSURE BACKFLOW ASSEMBLY FOR 3" & GREATER

APPROVED / CITY ENGINEER			DWG. NO. 6-4.5
DES.	DWN.	CKD.	DATE
WHO	WHO	RAS	08/24/2017

DG6-4.5.DWG

LINE SIZE	BALL VALVE	VALVE BOX
3/4"	FORD FOB11-333W	CARSON MODEL 910-12
1"	FORD FOB11-444W	
1 1/2"	FORD FOB11-666W	
2"	FORD FOB11-777W	
2 1/2"	FORD FOB11-788W	



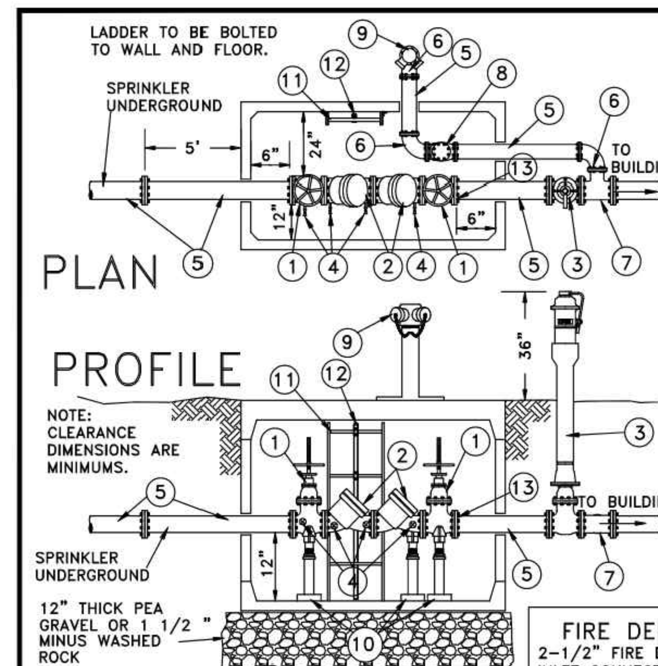
GENERAL NOTES:
1. THIS CONFIGURATION IS REQUIRED FOR AN IRRIGATION SYSTEM THAT HAS IT'S OWN WATER METER SUCH AS COMMERCIAL SITES.
2. DO NOT INSTALL IN AREAS SUBJECT TO FLOODING.
3. ALL PIPING SHALL BE BLUE POLY PIPE.

CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

IRRIGATION SERVICE FOR COMMERCIAL SITES TYPE II

APPROVED / CITY ENGINEER			DWG. NO. 6-4.7
DES.	DWN.	CKD.	DATE
WHO	WHO	RAS	08/24/2017

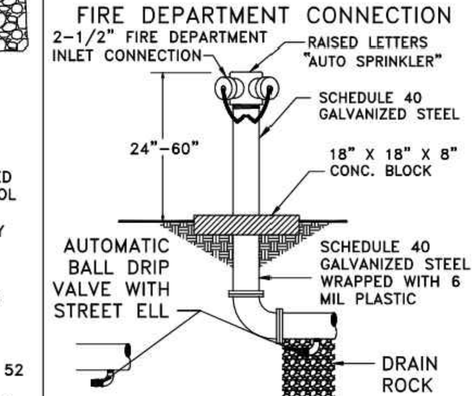
DG6-4.7.DWG



MATERIAL LIST:
1. OS&Y GATE VALVE W/HANDWHEEL FL X FL
2. DSHS APPROVED CHECK VALVE FL X FL
3. POST INDICATOR VALVE
4. TEST COCK – 4 REQUIRED
5. CLASS 52 DI WALL PIPE FL X FL
6. CLASS 52 DI 90° BEND FL X FL
7. CLASS 52 DI TEE FL X FL
8. SWING CHECK VALVE W/BALL DRIP ASSEMBLY
9. FIRE DEPARTMENT CONNECTION
10. VALVE STANDS
11. LADDER
12. BILCO LU1 SAFETY POST
13. FIELD FLANGE

NOTE: BACKFLOW PREVENTION LOCATED INSIDE OF BUILDING

FIRE DEPARTMENT CONNECTION



GENERAL NOTES:
1. REFER TO THE CITY OF LACEY DEVELOPMENT GUIDELINES AND PUBLIC WORKS STANDARDS, SECTION 6.110, BACKFLOW PREVENTION, FOR SELECTION AND INSTALLATION DETAILS.
2. THE BPA (BACKFLOW PREVENTION ASSEMBLY) INSTALLATION SHALL BE INSPECTED AND APPROVED BY A CITY OF LACEY CROSS-CONNECTION CONTROL SPECIALIST (CCS), PRIOR TO TESTING.
3. WHEN THE INSTALLATION HAS BEEN APPROVED BY THE LACEY CCS, THE DCDA MUST PASS A FUNCTIONALITY TEST BY A WASHINGTON STATE CERTIFIED BAT AS PER DOH STANDARDS. DOCUMENTATION OF TESTING MUST BE SUBMITTED TO THE LACEY PUBLIC WORKS DEPARTMENT.
4. THOROUGHLY FLUSH LINES PRIOR TO INSTALLING BACK FLOW ASSEMBLY.
5. PIPE FROM VAULT TO BUILDING SHALL BE CLASS 52 DI, FLANGED AND NO VICTAULIC COUPLING.
6. TAMPER SWITCHES SHALL BE INSTALLED ON 1 AND 3 CONNECTED TO BUILDING FIRE ALARM SYSTEM.
7. WHERE PIPING PASSES THROUGH CONCRETE WALL PROVIDE 2" CLEARANCE W/ WATERPROOF MASTIC OR FLEXIBLE SEALANT.
8. DIAMETER OF PIPE AND FITTINGS TO BE DETERMINED BY CERTIFIED SPRINKLER DESIGNER.
9. ALL PIPING SHALL BE A MINIMUM OF 4" DIAMETER AS PER NFPA13.
10. ALL VAULTS SHALL BE EQUIPPED WITH A DRAIN OR FLOAT SWITCH ACTIVATED ELECTRIC SUMP PUMP.
11. ALL FIRE SPRINKLER LINES UP TO THE FIRST VALVE ON THE DCDA SHALL BE DISINFECTED, PRESSURE TESTED, FLUSHED AND TESTED FOR PURITY PER THE CITY OF LACEY STANDARDS.

CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

SINGLE SERVICE DOUBLE CHECK DETECTOR (DCDA) VALVE ASSEMBLY W/FDC

APPROVED / CITY ENGINEER			DWG. NO. 6-5.1
DES.	DWN.	CKD.	DATE
WHO	WHO	RAS	12/15/2014

DG6-5.1.DWG

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BENJAMIN E. A. ENFIELD — STATE OF WASHINGTON — 49448 — REGISTERED PROFESSIONAL ENGINEER — 04/21/2023

NEW POLICE STATION
CITY OF LACEY
222 COLLEGE STREET SE, LACEY, WA 98503
CITY PROJECT NO. PW 2022-13

ORIGINAL SHEET SIZE = 24 x 36
HALF SIZE REDUCTIONS = 11 x 17

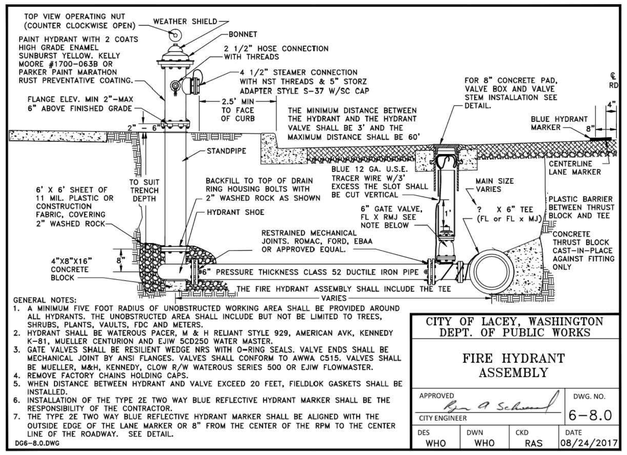
REVISIONS:

DATE:
04.20.2023

SITE PLAN REVIEW

SHEET NO.
C-602

WATER DETAILS



GENERAL NOTES:
1. A MINIMUM FIVE FOOT RADIUS OF UNOBSTRUCTED WORKING AREA SHALL BE PROVIDED AROUND ALL HYDRANTS. THE UNOBSTRUCTED AREA SHALL INCLUDE BUT NOT BE LIMITED TO TREES, SHRUBS, PLANTS, VAULTS, FDC AND METERS.
2. HYDRANT SHALL BE WATEROUS PACER, M & H RELIANT STYLE 929, AMERICAN AVK, KENNEDY K-81, MUELLER CENTURION AND EJIW 5CD250 WATER MASTER.
3. GATE VALVES SHALL BE RESILIENT WEDGE NRS WITH O-RING SEALS. VALVE ENDS SHALL BE MECHANICAL JOINT BY ANSI FLANGES. VALVES SHALL CONFORM TO AWWA C515. VALVES SHALL BE MUELLER, M&H, KENNEDY, CLOW R/W WATEROUS SERIES 500 OR EJW FLOWMASTER.
4. REMOVE FACTORY CHAINS HOLDING CAPS.
5. WHEN DISTANCE BETWEEN HYDRANT AND VALVE EXCEED 20 FEET, FIELDLOK GASKETS SHALL BE INSTALLED.
6. INSTALLATION OF THE TYPE 2E TWO WAY BLUE REFLECTIVE HYDRANT MARKER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. THE TYPE 2E TWO WAY BLUE REFLECTIVE HYDRANT MARKER SHALL BE ALIGNED WITH THE OUTSIDE EDGE OF THE LANE MARKER OR 8" FROM THE CENTER OF THE RPM TO THE CENTER LINE OF THE ROADWAY. SEE DETAIL.

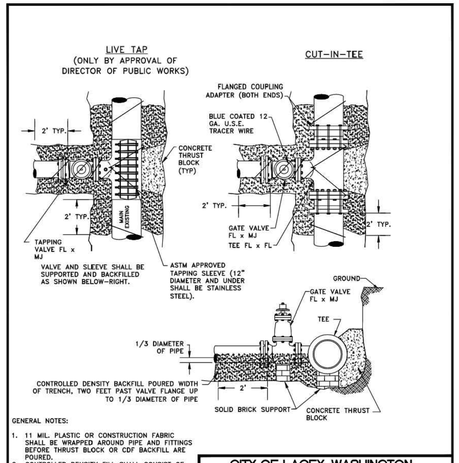
DG6-8.0.DWG

CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

FIRE HYDRANT ASSEMBLY

APPROVED CITY ENGINEER — DWG. NO. 6-8.0

DES	DWN	CKD	DATE
WHO	WHO	RAS	08/24/2017



GENERAL NOTES:
1. 11 MIL. PLASTIC OR CONSTRUCTION FABRIC SHALL BE WRAPPED AROUND PIPE AND FITTINGS BEFORE THRUST BLOCK OR CDF BACKFILL ARE POURED.
2. CONTROLLED DENSITY FILL SHALL CONSIST OF 1750# SAND, 1750# PEA GRAVEL, 230# WATER, 141# CEMENT, 6 OUNCES WATER REDUCING AGENT PER 100# CEMENT.
3. THE EXISTING MAIN, TAPPING SLEEVE AND VALVE SHALL BE SUPPORTED THROUGHOUT THE ENTIRE PROCESS WHEN TAPPING THE EXISTING WATER MAIN.
4. CONNECT TO EXISTING TRACER WIRE, IF PRESENT.
5. CUTTING AC PIPE REQUIRES PROPER AC CUTTING AND DISPOSAL PRACTICES BE FOLLOWED. REFER TO OLYMPIC AIR POLLUTION CONTROL AUTHORITY DOCUMENT AND AWWA AC PIPE CUTTING DOCUMENT. AC PIPE CUTTER SHALL BE CERTIFIED.
6. ADDITIONAL VALVES MAYBE REQUIRED WITH CUT IN OFF TEE.

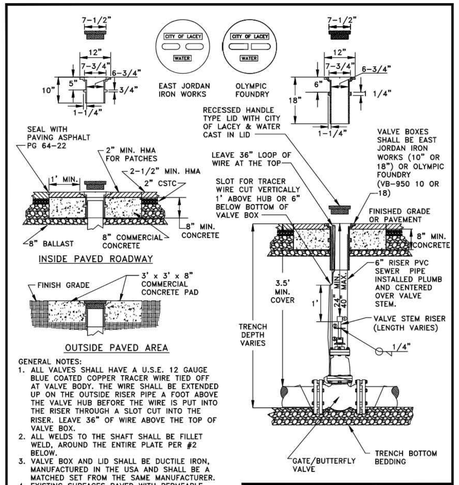
DG6-11.0.DWG

CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

CONNECTION TO EXISTING MAIN

APPROVED CITY ENGINEER — DWG. NO. 6-11.0

DES.	DWN.	CKD.	DATE
LRW	WHO	RAS	08/24/2017



GENERAL NOTES:
1. ALL VALVES SHALL HAVE A U.S.E. 12 GAUGE BLUE COATED COPPER TRACER WIRE TIED OFF AT VALVE BODY. THE WIRE SHALL BE EXTENDED UP ON THE OUTSIDE RISER PIPE A FOOT ABOVE THE VALVE HUB BEFORE THE WIRE IS PUT INTO THE RISER THROUGH A SLOT CUT INTO THE RISER. LEAVE 36" OF WIRE ABOVE THE TOP OF VALVE BOX.
2. ALL WELDS TO THE SHAFT SHALL BE FILLET WELD, AROUND THE ENTIRE PLATE PER #2 BELOW.
3. VALVE BOX AND LID SHALL BE DUCTILE IRON, MANUFACTURED IN THE USA AND SHALL BE A MATCHED SET FROM THE SAME MANUFACTURER.
4. EXISTING SURFACES PAVED WITH PERMEABLE MATERIALS SHALL BE REPLACED IN-KIND WHERE FEASIBLE IN CONFORMANCE WITH 4B.180 TRENCH BACKFILL AND RESTORATION.

VALVE STEM EXTENSION LEGEND
① VALVE OPERATING NUT OR 1-7/8" X 1-7/8" X 2" HIGH GRADE STEEL WELDED TO GUIDE PLATE.
② 3/16" THICK X 5 1/5" DIA STEEL GUIDE PLATE WELDED TO RISER SHAFT.
③ 2"x2"x 3/16" SQUARE STRUCTURAL STEEL TUBING TO FIT OPERATING NUT. LENGTH AS REQUIRED.

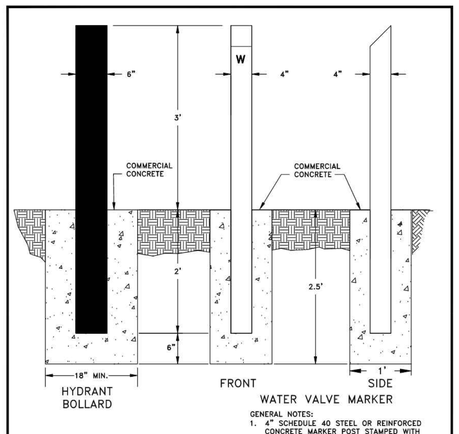
DG6-12.0.DWG

CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

STANDARD VALVE BOX INSTALLATION

APPROVED CITY ENGINEER — DWG. NO. 6-12.0

DES	DWN	CKD	DATE
WHO	WHO	RAS	08/24/2017



GENERAL NOTES:
1. HYDRANT BOLLARDS SHALL BE INSTALLED AT A MINIMUM OF 5' FROM THE HYDRANT SITUATED SO AS NOT TO BLOCK ANY OF THE HYDRANT PORTS.
2. THE HYDRANT BOLLARDS SHALL BE 6" IN DIAMETER SCHEDULE 20 STEEL POST AND FILLED WITH CONCRETE.
3. THE HYDRANT BOLLARDS SHALL BE COATED WITH ONE PRIMER COAT AND TWO COATS OUTDOOR OIL BASE ENAMEL, THE SAME COLOR AS THE HYDRANT, SEE DETAIL.
4. WHEN HYDRANT BOLLARDS ARE REQUIRED IN HIGH TRAFFIC AREAS GLASS BEADS SHALL BE SPRAYED OR PLACE ON TO THE WET PAINT TO PROVIDE BETTER VISIBILITY AT NIGHT.

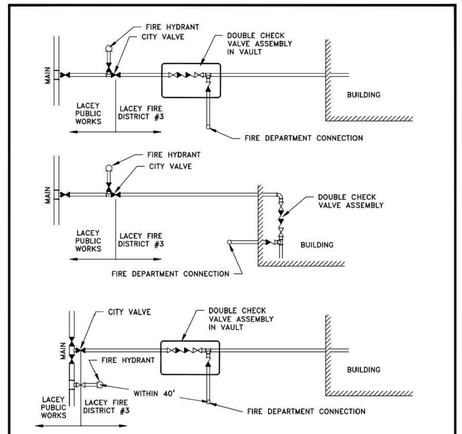
DG6-13.0.DWG

CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

HYDRANT BOLLARD & WATER VALVE MARKER POST DETAIL

APPROVED CITY ENGINEER — DWG. NO. 6-13.0

DES	DWN	CKD	DATE
WHO	WHO	RAS	08/24/2017



GENERAL NOTES:
1. THE CITY OF LACEY INSPECTOR SHALL WITNESS THE TESTING OF THE WATER MAINS AND HYDRANTS TO THE CITY'S VALVE. THE REQUIREMENT FOR DISINFECTING AND PURITY SHALL BE PER SECTION 6.200. NOTIFY THE CITY INSPECTOR FOR ALL TESTING THAT IS REQUIRED.
2. ALL FIRE SPRINKLER MAINS SHALL BE DUCTILE IRON CLASS 52 WITH 12 GA. BLUE COATED TRACER WIRE TO THE DCVA IN A VAULT OR AT THE BUILDING.
3. SEE CHAPTER 6.110 FOR MORE INFORMATION ON BACKFLOW PREVENTION.
4. ALL HYDRANTS SHALL BE INSTALLED ON THE UP STREAM SIDE OF THE FIRE LINE CONNECTION.
5. THERE SHALL BE 3 VALVES ON A TEE AND 4 VALVES ON A CROSS WHEN THE CITY'S WATER MAIN SERVICES A FIRE LINE OR AS DEEMED NECESSARY BY THE FIRE MARSHAL.
6. THE FDC SHALL BE LOCATED WITHIN 40' OF A HYDRANT.
7. ALL FIRE SPRINKLER MAINS SHALL BE TESTED AND PURIFIED TO THE 1ST VALVE AT THE DCDA.

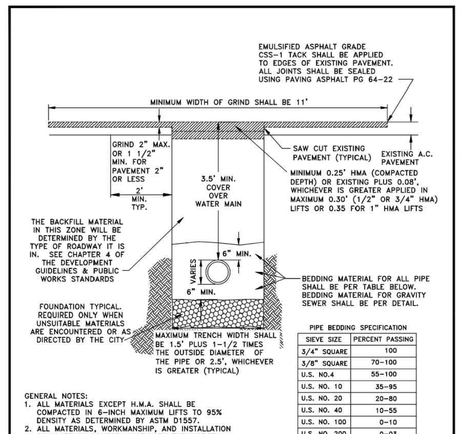
DG6-25.1.DWG

CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

FIRE SPRINKLER UNDERGROUND TESTING LIMITS

APPROVED CITY ENGINEER — DWG. NO. 6-25.1

DES	DWN	CKD	DATE
LRW	WHO	RAS	12/15/2014



PIPE BEDDING SPECIFICATION

SIEVE SIZE	PERCENT PASSING
3/4" SQUARE	100
3/8" SQUARE	70-100
U.S. NO.4	55-100
U.S. NO. 10	35-95
U.S. NO. 20	20-80
U.S. NO. 40	10-55
U.S. NO. 100	0-10
U.S. NO. 200	0-03

GENERAL NOTES:
1. ALL MATERIALS EXCEPT H.M.A. SHALL BE COMPACTED IN 6-INCH MAXIMUM LIFTS TO 95% DENSITY AS DETERMINED BY ASTM D1557.
2. ALL MATERIALS, WORKMANSHIP, AND INSTALLATION SHALL BE IN CONFORMANCE WITH THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AS AMENDED BY CITY OF LACEY STANDARDS.
3. KEEP TRENCH BOTTOM COMPACTED WITH UNIFORM GRADE. NO TEMPORARY SUPPORTS, I.E. BLOCKS, WILL BE ALLOWED TO SUPPORT PIPE. TRENCH BOTTOM SHALL BE TO GRADE PRIOR TO PIPE INSTALLATION.
4. WHENEVER GROUND WATER IS PRESENT A BARRIER SHALL BE INSTALLED ABOVE THE BEDDING.
5. DEVIATION FROM COMPACTION STANDARDS MAY BE APPROVED BY THE DIRECTOR, OR DESIGNEE, WHERE RECOMMENDED BY THE LICENSED PROFESSIONAL ENGINEER FOR PLANNED OR EXISTING INFILTRATION FACILITIES.
6. EXISTING SURFACES PAVED WITH PERMEABLE MATERIALS SHALL BE REPLACED IN-KIND WHERE FEASIBLE IN CONFORMANCE WITH 4B.180 TRENCH BACKFILL AND RESTORATION.

DG6-26.0.DWG

CITY OF LACEY, WASHINGTON
DEPT. OF PUBLIC WORKS

PIPE ZONE BEDDING FOR WATER MAINS & SERVICES

APPROVED CITY ENGINEER — DWG. NO. 6-26.0

DES	DWN	CKD	DATE
WHO	WHO	RAS	08/24/2017

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KMB Project # 22022

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Lacey, WA 98503
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www.kpff.com

KPFF Project # 10182200044

BENJAMIN E. A. ENDELL — STATE OF WASHINGTON — 49448 — REGISTERED PROFESSIONAL ENGINEER
04/21/2023

NEW POLICE STATION
CITY OF LACEY
222 COLLEGE STREET SE, LACEY, WA 98503
CITY PROJECT NO. PW 2022-13

ORIGINAL SHEET SIZE = 24 x 36
HALF SIZE REDUCTIONS = 11 x 17

REVISIONS:

DATE:
04.20.2023
SITE PLAN REVIEW

SHEET NO.
C-602
WATER DETAILS

LEGEND

SEWER LINE ——— SS ———

FORCE MAIN LINE ——— FM ———

SEWER MANHOLE

SEWER FLOW DIRECTION ARROW

SEWER CLEAN-OUT

SEWER GATE VALVE

I-5 CORRIDOR

TRAINING BUILDING
ADD ALT #1
(UNDER SEPARATE PLAN SET)
FF=181.5

NEW POLICE BUILDING
UPPER FF: 193.00
LOWER FF: 178.50

SSCO #4, 6" CO
RIM=181.62
IE = 174.98 (6") (SE)

106 LF 6" PVC
SS @ 1.98%

SSMH #5, TYPE 1-48"
RIM=177.72
IE = 172.88 (6") (NW)
IE = 172.71 (8") (SE)
IE = 172.88 (6") (SW)

43 LF 6" PVC
SS @ 2.00%

SSCO #3, 6" CO
RIM=178.45
IE = 173.75 (6") (NE)

155 LF 8" PVC
SS @ 1.00%

SSMH #4, TYPE 1-48"
RIM=176.80
IE = 171.15 (8") (NW)
IE = 171.05 (8") (SE)
IE = 171.15 (6") (SW)

16 LF 6" PVC
SS @ 15.55%

SSCO #2, 6" CO
RIM=184.00
IE = 173.75 (6") (NE)

28 LF 6" PVC
SS @ 7.12%

140 LF 8" PVC
SS @ 1.00%

OILWATER SEPARATOR,
100 GPM OWS
RIM=178.25
IE = 173.50 (6") (SW)
IE = 173.00 (6") (NE)
IE = 173.50 (6") (SW)

26 LF 6" PVC
SS @ 4.23%

5 LF 6" PVC
SS @ 15.00%

SEWER GRINDER PUMP STATION,
DUPLEX SUBMERSIBLE PUMPS
140 GPM @ 69 FT TOTAL HEAD
RIM=178.59
IE = 169.64 (8") (NW)
IE = 174.24 (3") (W)

SSCO #1, 6" SSCO
RIM=178.39
IE = 174.60 (6") (NE)

5 LF 6" PVC
SS @ 2.00%

GRIT CHAMBER, TYPE 1 CB
RIM=177.93
IE = 174.38 (6") (NE)
IE = 174.38 (6") (S)

610 LF 3" HDPE FORCE MAIN

6" MECHANICALLY ACTUATED VALVE FOR SEWER DISCHARGE LINE TO BE OPERATED BY PUSH BUTTON. VALVE TO BE OPENED AT START OF CAR WASHING AND SET TO AUTOMATICALLY CLOSE AFTER 4 HOURS.

COLLEGE STREET SE

3RD AVE SE

MATCHLINE: SEE SHEET C-701

VERTICAL DATUM
NGVD 29

BASIS OF MERIDIAN
CITY OF LACEY
COORDINATE SYSTEM

0 30 60
SCALE

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SITE PLAN REVIEW

SHEET NO.
C-700

SEWER PLAN
NORTH

LEGEND

SEWER LINE — SS

FORCE MAIN LINE — FM

SEWER MANHOLE

SEWER FLOW DIRECTION ARROW

SEWER CLEAN-OUT

SEWER GATE VALVE

MATCHLINE: SEE SHEET C-700

COLLEGE STREET SE

EXISTING CITY HALL BUILDING

EXISTING POLICE BUILDING

LIBRARY

SSMH #1, SADDLE MANHOLE
RIM= 187.90
IE = 179.28 (8") (N)
IE = 179.28 (8") (S)
IE = 179.38 (8") (E)

433 LF 8" PVC
SS @ 0.50%

CONNECT TO EXISTING 8" CITY GRAVITY SEWER LINE
CONTRACTOR TO FIELD VERIFY SIZE, LOCATION AND DEPTH PRIOR TO INSTALLATION

SAWCUT AND PAVEMENT RESTORATION OF EXISTING PARKING LOT FOR SEWER MAIN INSTALLATION, SEE PAVING PLAN FOR MORE DETAIL.

SSMH #2, TYPE 1-48"
RIM= 189.75
IE = 181.65 (8") (E)
IE = 181.55 (8") (W)

203 LF 8" PVC
SS @ 0.50%

SSMH #3, TYPE 1-48"
PE LINED
RIM= 187.96
IE = 182.67 (8") (W)
IE = 182.77 (3") (N)

610 LF 3" HDPE FORCE MAIN

VERTICAL DATUM
NGVD 29

BASIS OF MERIDIAN
CITY OF LACEY
COORDINATE SYSTEM

0 30 60
SCALE

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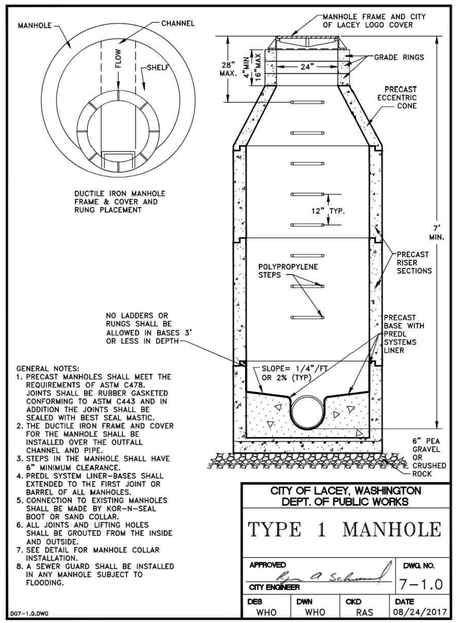
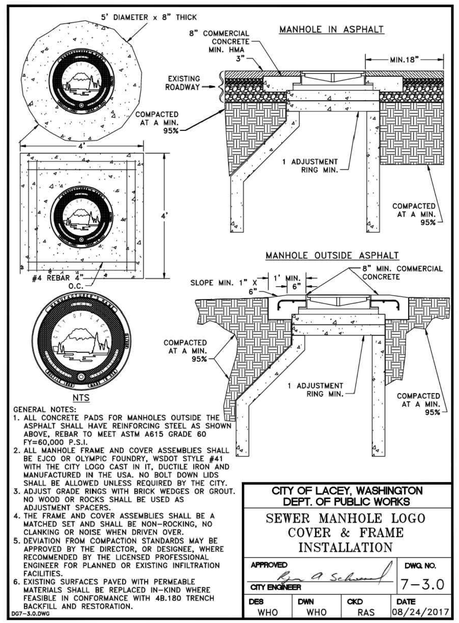
SITE PLAN REVIEW

SHEET NO.
C-701

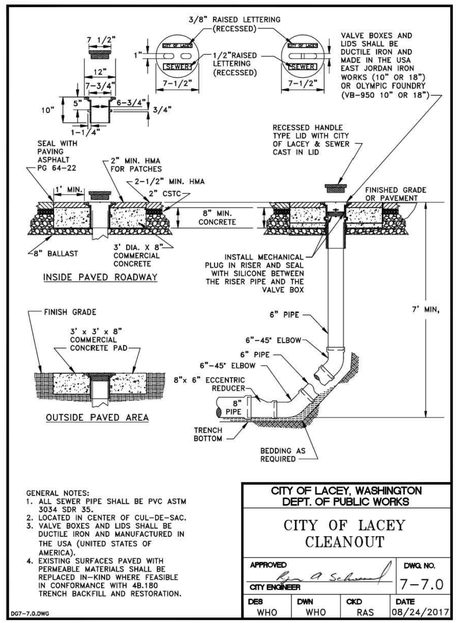
SEWER PLAN SOUTH



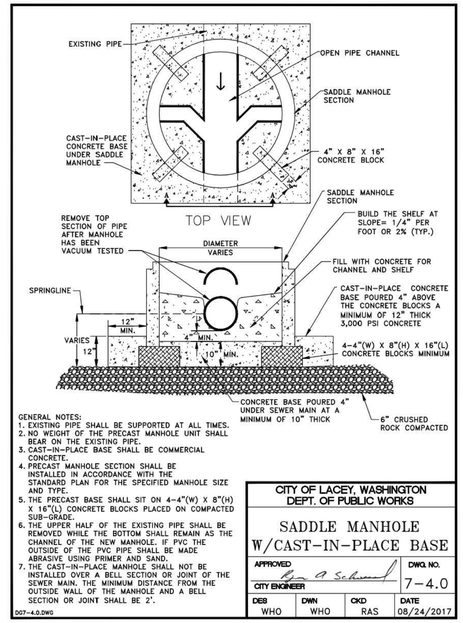
CITY OF LACEY, WASHINGTON DEPT. OF PUBLIC WORKS			
TYPE 1 MANHOLE			
APPROVED / CITY ENGINEER			DWG. NO. 7-1.0
DES	DWN	CKD	DATE
WHO	WHO	RAS	08/24/2017



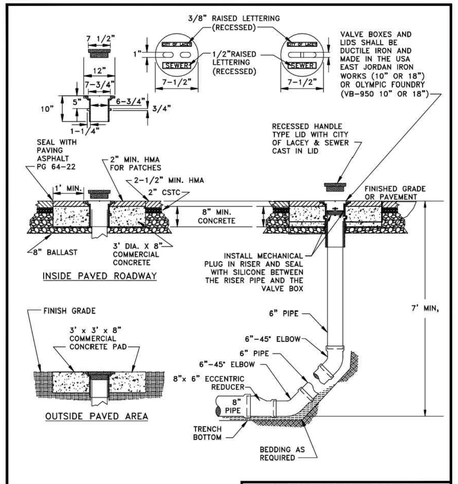
CITY OF LACEY, WASHINGTON DEPT. OF PUBLIC WORKS			
SEWER MANHOLE LOGO COVER & FRAME INSTALLATION			
APPROVED / CITY ENGINEER			DWG. NO. 7-3.0
DES	DWN	CKD	DATE
WHO	WHO	RAS	08/24/2017



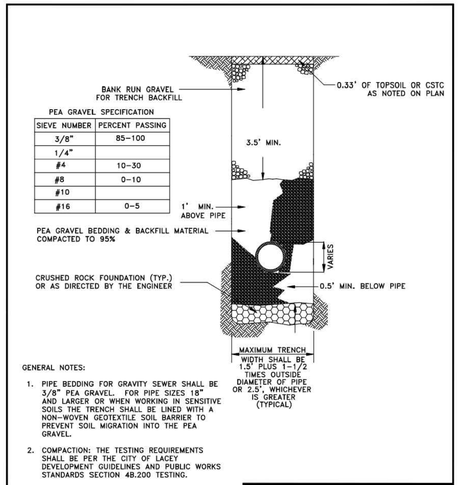
CITY OF LACEY, WASHINGTON DEPT. OF PUBLIC WORKS			
CITY OF LACEY CLEANOUT			
APPROVED / CITY ENGINEER			DWG. NO. 7-7.0
DES	DWN	CKD	DATE
WHO	WHO	RAS	08/24/2017



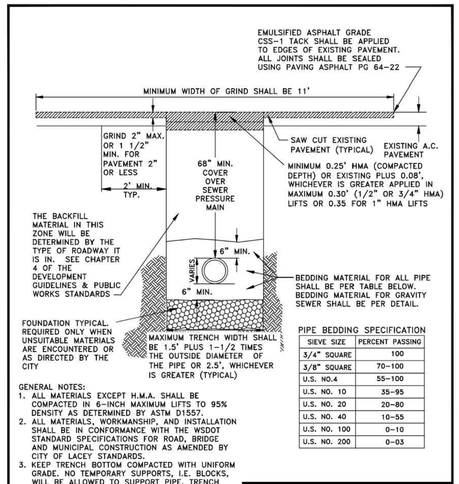
CITY OF LACEY, WASHINGTON DEPT. OF PUBLIC WORKS			
SADDLE MANHOLE W/CAST-IN-PLACE BASE			
APPROVED / CITY ENGINEER			DWG. NO. 7-4.0
DES	DWN	CKD	DATE
WHO	WHO	RAS	08/24/2017



CITY OF LACEY, WASHINGTON DEPT. OF PUBLIC WORKS			
CITY OF LACEY CLEANOUT			
APPROVED / CITY ENGINEER			DWG. NO. 7-7.0
DES	DWN	CKD	DATE
WHO	WHO	RAS	08/24/2017



CITY OF LACEY, WASHINGTON DEPT. OF PUBLIC WORKS			
GRAVITY SEWER PIPE BEDDING REQUIREMENT			
APPROVED / CITY ENGINEER			DWG. NO. 7-14.0
DES.	DWN.	CKD.	DATE
WHO	BRM	RAS	08/24/2017



CITY OF LACEY, WASHINGTON DEPT. OF PUBLIC WORKS			
PIPE ZONE BEDDING FOR SEWER PRESSURE MAINS & SERVICES			
APPROVED / CITY ENGINEER			DWG. NO. 7-14.1
DES	DWN	CKD	DATE
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SITE PLAN REVIEW

SHEET NO.
C-702
SEWER DETAILS