CITY OF KIRKLAND

GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION PHASE 1

JANUARY 4, 2024

JOB NO. 19-23-PW

CIP NO. SDC0900000

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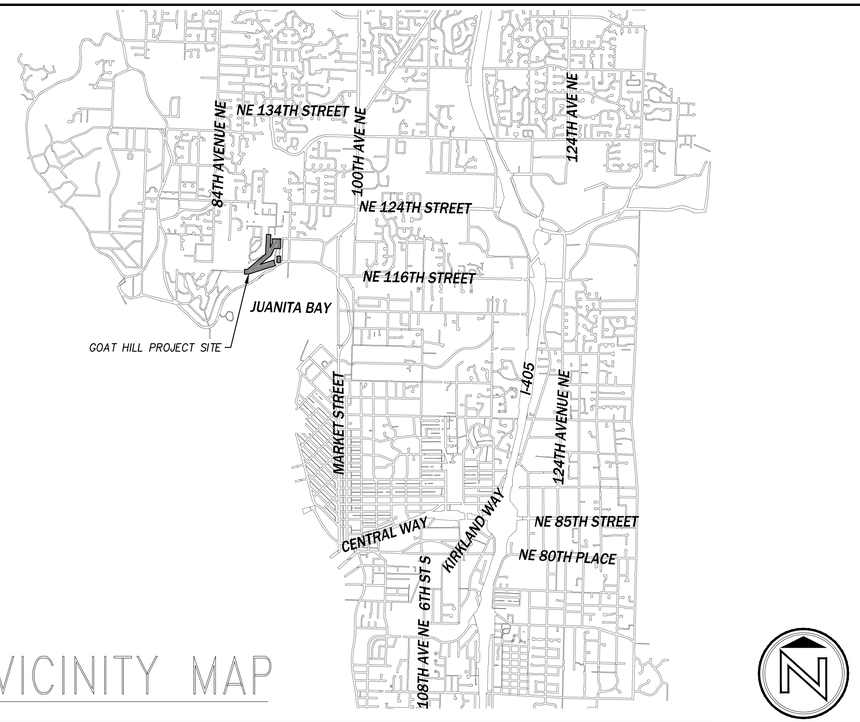

VICINITY MAP

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LEGEND

	EXISTING	PROPOSED
ROADWAY CENTERLINE		
PROJECT BOUNDARY LINE		
PROPERTY BOUNDARY LINE		
RIGHT-OF-WAY LINE		
EASEMENT LINE		
EDGE OF PAVEMENT LINE		
10' CONTOUR LINE	290	290
2' CONTOUR LINE		
SANITARY SEWER MAIN	SS	SS SS
WATER LINE	W	
FIRE SUPPLY	F	F F F F F F F
STORM PIPE	SD	
GAS LINE	GAS	GAS
FENCE LINE	X	
POWER LINE	OP	
BURIED POWER LINE	BP	
UTILITY EASEMENT		
TELEPHONE LINE	T	
BURIED TELEPHONE LINE	BT	
SWALE		
SILT FENCE		X X X X X
CONSTRUCTION FENCING		// // // //
CLEARING LIMIT		
SANITARY SEWER CLEAN OUT		
SANITARY SEWER MANHOLE		
STORM DRAIN CATCH BASIN - TYPE I		
STORM DRAIN CATCH BASIN - TYPE II		
STORM DRAIN INLET (NO CATCH)		
STORM DRAIN CULVERT		
WATER CAP/PLUG		
WATER COUPLING		
GUARD POST		
REDUCER		
THRUST BLOCK		
WATER METER		
2 NOZZLE FIRE HYDRANT		
3 NOZZLE FIRE HYDRANT		
FLANGE/BUND FL JOINT		
MECHANICAL JOINT		
PUSH-ON/HUB JOINT		
THREAD JOINT		
AIR RELIEF VALVE		
BLOW-OFF VALVE		
BUTTERFLY VALVE		
CHECK VALVE		
GATE/GENERAL VALVE		
PLUG VALVE		
GAS METER		
GAS VALVE		
PAD MOUNTED TRANSFORMER		
POWER VAULT	P	
TRANSMISSION TOWER (SCALEABLE)		
UTILITY POLE		
POWER POLE		
UTILITY POLE ANCHOR		
TELEPHONE RISER		
TELEPHONE VAULT		T
BUS STOP	BUS	BUS
MAIL BOX		
RIP RAP		
ROCKERY		
SHRUB		
GENERAL SIGN		
REGULATORY SIGN		
TREE (CONIFER)		
TREE (DECIDUOUS)		
YARD LIGHT		
BRIDGE/TUNNEL		
ASPHALT PAVEMENT		
CONCRETE		

GENERAL PROJECT NOTES

1. ALL WORKMANSHIP, METHODS AND MATERIALS FOR THIS PROJECT SHALL CONFORM TO THE 2023 EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS PRODUCED BY WSDOT AND THE WASHINGTON STATE CHAPTER OF THE APWA; APPLICABLE CITY OF KIRKLAND MUNICIPAL CODE AND PUBLIC WORKS AND DEVELOPMENT STANDARDS; APPLICABLE KING COUNTY CODE AND PUBLIC WORKS AND DEVELOPMENT STANDARDS, NORTHSHORE UTILITY DISTRICT (NUD) DEVELOPMENT STANDARDS FOR WATER SYSTEMS; NORTHSHORE UTILITY DISTRICT (NUD) DEVELOPMENT STANDARDS FOR SANITARY SEWER SYSTEMS; AND ANY SPECIAL PROVISIONS PROVIDED BY THESE PLANS OR OTHER CONTRACT DOCUMENTS FOR THE PROJECT.

2. EXISTING UTILITIES ARE SHOWN IN THESE PLANS PER THE LATEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES AND RELATED SURFACE FEATURES WITHIN THE PROJECT AREA AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES WITH THE PLAN INFORMATION PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL, AT MINIMUM, CONTACT THE UNDERGROUND UTILITIES LOCATE CENTER (1-800-424-5555) TO HAVE UTILITIES VERIFIED ON THE GROUND PRIOR TO CONSTRUCTION.

3. THE TEMPORARY EROSION AND SEDIMENTATION CONTROL (TESC) MEASURES SHOWN IN THESE PLANS SHALL BE CONSIDERED A MINIMUM. THE CONTRACTOR SHALL PROVIDE ANY REASONABLE ADDITIONAL MEASURES AS MAY BE REQUIRED TO FACILITATE ACTUAL SITE RUNOFF CONDITIONS AT THE TIME OF CONSTRUCTION. ALL NECESSARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN-PLACE PRIOR TO ANY DEMOLITION OR CONSTRUCTION ACTIVITIES.

4. ALL NEW PAVEMENT, SIDEWALKS, AND CURB AND GUTTER INSTALLED BY THIS PROJECT SHALL BEAR ON SUITABLE, COMPACT FOUNDATION SOILS IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND PROJECT CONTRACT DOCUMENTS. SIMILAR EXISTING FACILITIES TO REMAIN, WHICH ARE DISTURBED OR DAMAGED DURING CONSTRUCTION, SHALL BE REPLACED IN-KIND TO THE SAME STANDARDS OF NEW FACILITIES.

5. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE WSDOT STANDARD PLANS AND SPECIFICATIONS AS AMENDED OR SUPPLEMENTED BY THE PROJECT PLANS, DETAILS, AND SPECIFICATIONS AS PROVIDED IN THE CONTRACT DOCUMENTS.

6. ALL EXISTING ON-SITE DOMESTIC WATER WELLS AND/OR SEWER SEPTIC TANKS SHALL BE PROPERLY ABANDONED BY A LICENSED CONTRACTOR, CERTIFIED TO PERFORM SUCH WORK, AND WRITTEN VERIFICATION OF ABANDONMENT SHALL BE PROVIDED TO THE OWNER, WASHINGTON STATE DEPARTMENT OF ECOLOGY, AND KING COUNTY HEALTH DEPARTMENT IN ACCORDANCE WITH APPLICABLE AGENCY REGULATIONS.

7. THE MATERIALS AND METHODS OF INSTALLATION FOR ALL PUBLIC DOMESTIC POTABLE AND FIRE WATER SUPPLY SYSTEMS SHALL BE IN ACCORDANCE WITH APPLICABLE STANDARDS OF NORTHSHORE UTILITY DISTRICT.

8. THE MATERIALS AND METHODS OF INSTALLATION FOR ALL PUBLIC SANITARY SEWER SYSTEMS SHALL BE IN ACCORDANCE WITH APPLICABLE STANDARDS OF NORTHSHORE UTILITY DISTRICT.

9. AT LEAST TWO COPIES OF THESE PLANS SHALL BE ON THE JOB SITE WHEN CONSTRUCTION IS IN PROGRESS. THE CONTRACTOR SHALL ALSO HAVE COPIES OF THE APPLICABLE REGULATORY AGENCY STANDARDS AVAILABLE AT THE JOB SITE DURING THE RELATED CONSTRUCTION OPERATIONS. ALL APPLICABLE PERMITS SHALL BE OBTAINED PRIOR TO ANY CONSTRUCTION ACTIVITY. ONE COMPLETE SET OF PROJECT PLANS WITH RECORDS OF AS-BUILT INFORMATION SHALL BE PROVIDED TO THE PROJECT ENGINEER AT THE END OF THE PROJECT.

9\. THE CONTRACTOR SHALL COORDINATE ACTIVITIES OF ALL UTILITY PURVEYORS IMPACTED BY WORK FOR THIS PROJECT AND SHALL CONTACT THEM PRIOR TO CONSTRUCTION TO SCHEDULE WORK FOR PROVISIONS FOR AND BE RESPONSIBLE TO SUPPORT, MAINTAIN, OR OTHERWISE PROTECT AND KEEP IN SERVICE ALL EXISTING UTILITIES WHETHER SHOWN OR NOT SHOWN ON THESE PLANS DURING CONSTRUCTION.

10. UTILITIES, OR INTERFERING PORTIONS OF UTILITIES, THAT ARE ABANDONED IN PLACE SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO COMPLETE THE PROPOSED WORK. THE CONTRACTOR SHALL PLUG THE REMAINING EXPOSED ENDS OF ABANDONED UTILITIES. CUTTING AND PLUGGING OF LINES TO BE ABANDONED SHALL BE CONSIDERED INCIDENTAL TO OTHER WORK PERFORMED.

11. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL PROVISIONS OF THE SOILS REPORT FOR THE SITE BE OBSERVED AND COMPLIED WITH DURING ALL PHASES OF SITE PREPARATION, GRADING OPERATIONS, FOUNDATION, SLAB AND PAVING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY OF ANY PROVISION OF THE SOIL REPORT WHICH CONFLICT WITH INFORMATION SHOWN ELSEWHERE ON THESE DRAWINGS, OR WHICH REQUIRES FURTHER CLARIFICATION.

12. THE CONTRACTOR OR OWNER SHALL OBTAIN THE SERVICES OF A QUALIFIED SOILS ENGINEER AND/OR TESTING AGENCY TO PERFORM SUBGRADE/BACKFILL DENSITY TESTS OR TO DIRECT THE REMOVAL AND REPLACEMENT OF ANY UNSUITABLE MATERIALS DURING CONSTRUCTION. A REPRESENTATIVE OF THE SOILS ENGINEER AND/OR TESTING AGENCY SHALL BE AVAILABLE TO OBSERVE AND TO VERIFY FIELD CONDITIONS AS WORK PROCEEDS. THE SOILS ENGINEER SHALL SUBMIT FIELD REPORTS AS REQUIRED TO CERTIFY THE METHODS AND MATERIALS ARE IN ACCORDANCE WITH PROJECT SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE THE APPROPRIATE SOILS INSPECTIONS AND TESTING.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE TRAFFIC CONTROL DURING CONSTRUCTION ADJACENT TO OR WITHIN ALL PUBLIC ROADWAYS. TRAFFIC CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PRIVATE PROPERTY DRIVEWAYS DURING CONSTRUCTION.

14. ALL WORK PERTAINING TO THIS PROJECT SHALL BE SUBJECT TO INSPECTION BY THE CITY INSPECTOR OR HIS DESIGNATED REPRESENTATIVE. PRIOR TO ANY SITE WORK, THE CONTRACTOR SHALL CONTACT ______________ AT (____) ___-______ TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE.

ABBREVIATIONS

AC	ASPHALT CONCRETE PAVEMENT	LCPE	LINED CORRUGATED POLYETHYLENE PIPE
AP	ANGLE POINT	LF	LINEAL FEET
ATB	ASPHALT TREATED BASE	LT	LEFT
AVE	AVENUE	LUI	LAND USE INSPECTOR
BCR	BEGIN CURB RETURN	MAX.	MAXIMUM
BOC	BACK OF CURB	MDRT	MAJOR DEVELOPMENT REVIEW TEAM
BOW	BOTTOM OF WALL	MH	MANHOLE
℄	CENTERLINE	MIN.	MINIMUM
CB	CATCH BASIN	MJ	MECHANICAL JOINT
CDF	CONTROLLED DENSITY FILL	N	NORTH
CMP	CORRUGATED METAL PIPE	NIC	NOT IN CONTRACT
CONC.	CONCRETE	O.C.	ON CENTER
CONN.	CONNECTION	PC	POINT OF CURVATURE
CONT.	CONTINUOUS	PE	PLAIN END
COK	CITY OF KIRKLAND	PI	POINT OF INTERSECTION
CPP	CORRUGATED POLYETHYLENE PIPE (W/SMOOTH INTERIOR WALLS)	PL	PLACE
		PT	POINT OF TANGENCY
CSBC	CRUSHED SURFACING BASE COURSE	PVI	POINT OF VERTICAL INTERSECTION
CSTC	CRUSHED SURFACING TOP COURSE	PUE	PUBLIC UTILITY EASEMENT
DIA.	DIAMETER	REQ'D.	REQUIRED
DI	DUCTILE IRON	ROW	RIGHT-OF-WAY
DW	DRIVEWAY	RT	RIGHT
E	EAST	S	SOUTH
ECR	END CURB RETURN	SD	STORM DRAIN
EL.	ELEVATION	SP	SPACE
EOP	EDGE OF PAVEMENT	SS	SANITARY SEWER
ESC	EROSION AND SEDIMENT CONTROL	SSD	STOPPING SIGHT DISTANCE
ESD	ENTERING SIGHT DISTANCE	STA	STATION
ESMT.	EASEMENT	TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
EVA	EMERGENCY VEHICLE ACCESS	TOC	TOP OF CURB
EXIST.	EXISTING	TYP.	TYPICAL
FL	FLOW LINE	TBW	TOP BACK OF WALK
FL.	FLANGE	TOW	TOP OF WALL
FOC	FACE OF CURB	UNO	UNLESS NOTED OTHERWISE
HORIZ	HORIZONTAL	VERT.	VERTICAL
IE	INVERT ELEVATION	WSDOT	WASHINGTON DEPT. OF TRANSPORTATION
INT	INTERSECTION	W/	WITH
IE	INVERT	W	WEST
KCRS	KING COUNTY ROAD STANDARDS	WS	WATER SERVICE

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19–23–PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

LEGEND, NOTES AND ABBREVIATIONS

C0.01

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CITY OF KIRKLAND STANDARD PLAN NOTES

EROSION/SEDIMENTATION CONTROL

1. THE APPROVED CONSTRUCTION SEQUENCE SHALL BE AS FOLLOWS:
   a. CONDUCT PRE-CONSTRUCTION MEETING.
   b. FLAG OR FENCE CLEARING LIMITS.
   c. POST SIGN WITH NAME AND PHONE NUMBER OF TESC SUPERVISOR.
   d. INSTALL CATCH BASIN PROTECTION DOWNSTREAM AND AS DETERMINED BY THE CITY INSPECTOR.
   e. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).
   f. INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).
   g. CONSTRUCT SEDIMENT PONDS AND TRAPS.
   h. GRADE AND STABILIZE CONSTRUCTION ROADS.
   i. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, PIPE SLOPE DRAINS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.
   j. MAINTAIN EROSION CONTROL MEASURE IN ACCORDANCE WITH CITY OF KIRKLAND STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
   k. RELOCATE EROSION CONTROL MEASURES OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE, THE EROSION AND SEDIMENT CONTROL IS ALWAYS IN ACCORDANCE WITH THE CITY TESC MINIMUM REQUIREMENTS.
   l. COVER ALL AREAS WITHIN THE SPECIFIED TIME FRAME WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, CRUSHED ROCK OR EQUIVALENT.
   m. STABILIZE ALL AREAS THAT REACH FINAL GRADE WITHIN 7 DAYS.
   n. SEED OR SOD ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.
   o. UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE STABILIZED AND BEST MANAGEMENT PRACTICES REMOVED IF APPROPRIATE.
2. CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS CLEAN AND FREE OF CONTAMINANTS AT ALL TIMES AND FOR PREVENTING AN ILLICIT DISCHARGE (KMC 15.52) INTO THE MUNICIPAL STORM DRAIN SYSTEM. IF YOUR CONSTRUCTION PROJECT CAUSES AN ILLICIT DISCHARGE TO THE MUNICIPAL STORM DRAIN SYSTEM, THE CITY OF KIRKLAND STORM MAINTENANCE DIVISION WILL BE CALLED TO CLEAN THE PUBLIC STORM SYSTEM, AND OTHER AFFECTED PUBLIC INFRASTRUCTURE. THE CONTRACTOR(S), PROPERTY OWNER, AND ANY OTHER RESPONSIBLE PARTY MAY BE CHARGED ALL COSTS ASSOCIATED WITH THE CLEAN-UP AND MAY ALSO BE ASSESSED MONETARY PENALTIES (KMC 1.12.200). THE MINIMUM PENALTY IS $500. A FINE FOR A REPEAT VIOLATION SHALL BE A MULTIPLIED BY THE NUMBER OF VIOLATIONS. A FINE MAY BE REDUCED OR WAIVED FOR PERSONS WHO IMMEDIATELY SELF-REPORT VIOLATION TO THE CITY AT 425-587-3900. A FINAL INSPECTION OF YOUR PROJECT WILL NOT BE GRANTED UNTIL ALL COSTS ASSOCIATED WITH THE CLEAN-UP, AND PENALTIES, ARE PAID TO THE CITY OF KIRKLAND.
3. CONSTRUCTION DEWATERING DISCHARGES SHALL ALWAYS MEET WATER QUALITY GUIDELINES LISTED IN COK POLICY E-1. SPECIFICALLY, DISCHARGES TO THE PUBLIC STORMWATER DRAINAGE SYSTEM MUST BE BELOW 25 NTU, AND NOT CONSIDERED AN ILLICIT DISCHARGE (PER KMC 15.52.090). TEMPORARY DISCHARGES TO SANITARY SEWER REQUIRE PRIOR AUTHORIZATION AND PERMIT FROM KING COUNTY INDUSTRIAL WASTE PROGRAM (206-263-3000) AND NOTIFICATION TO THE PUBLIC WORKS CONSTRUCTION INSPECTOR.
4. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF KIRKLAND STANDARDS AND SPECIFICATIONS.
5. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE SET BY SURVEY AND CLEARLY FLAGGED IN THE FIELD BY A CLEARING CONTROL FENCE PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE OR REMOVAL OF ANY GROUND COVER BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE PERMITTEE/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
6. APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
7. THE IMPLEMENTATION OF THIS ESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE PERMITTEE/CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
8. A COPY OF THE APPROVED ESC PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
9. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS. WHEREVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
10. THE ESC FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS ON THE APPROVED PLANS. LOCATIONS MAY BE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL BY THE ENGINEER AND THE CITY OF KIRKLAND INSPECTOR.
11. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS. ADDITIONALLY, MORE ESC FACILITIES MAY BE REQUIRED TO ENSURE COMPLETE SILTATION CONTROL. THEREFORE, DURING THE COURSE OF CONSTRUCTION IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES OVER AND ABOVE THE MINIMUM REQUIREMENTS AS MAY BE NEEDED.
12. THE ESC FACILITIES SHALL BE INSPECTED BY THE PERMITTEE/CONTRACTOR DAILY DURING NON-RAINFALL PERIODS, EVERY HOUR (DAYLIGHT) DURING A RAINFALL EVENT, AND AT THE END OF EVERY RAINFALL, AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING. IN ADDITION, TEMPORARY SILTATION PONDS AND ALL TEMPORARY SILTATION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED, PERMANENT DRAINAGE FACILITIES ARE OPERATIONAL, AND THE POTENTIAL FOR EROSION HAS PASSED. WRITTEN RECORDS SHALL BE KEPT DOCUMENTING THE REVIEWS OF THE ESC FACILITIES.
13. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 48 HOURS FOLLOWING A STORM EVENT.
14. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
15. ALL DENUDED SOILS MUST BE STABILIZED WITH AN APPROVED TESC METHOD (E.G. SEEDING, MULCHING, PLASTIC COVERING, CRUSHED ROCK) WITHIN THE FOLLOWING TIMELINES:
    - MAY 1 TO SEPTEMBER 30 - SOILS MUST BE STABILIZED WITHIN 7 DAYS OF GRADING.
    - OCTOBER 1 TO APRIL 30 - SOILS MUST BE STABILIZED WITHIN 2 DAYS OF GRADING.
    - STABILIZE SOILS AT THE END OF THE WORKDAY PRIOR TO A WEEKEND, HOLIDAY, OR PREDICTED RAIN EVENT.
16. WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE (EXAMPLE: ANNUAL OR PERENNIAL RYE APPLIED AT APPROXIMATELY 80 POUNDS PER ACRE).
17. WHERE STRAW MULCH IS REQUIRED FOR TEMPORARY EROSION CONTROL, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF 2".
18. ALL LOTS ADJOINING OR HAVING ANY NATIVE GROWTH PROTECTION EASEMENTS (NGPE) SHALL HAVE A 6' HIGH TEMPORARY CONSTRUCTION FENCE (CHAIN LINK WITH PIER BLOCKS) SEPARATING THE LOT (OR BUILDABLE PORTIONS OF THE LOT) FROM THE AREA RESTRICTED BY THE NGPE AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR CLEARING AND REMAIN IN PLACE UNTIL THE PLANNING DEPARTMENT AUTHORIZES REMOVAL.
19. CLEARING LIMITS SHALL BE DELINEATED WITH A CLEARING CONTROL FENCE. THE CLEARING CONTROL FENCE SHALL CONSIST OF A 6-FT. HIGH CHAIN LINK FENCE ADJACENT THE DRIP LINE OF TREES TO BE SAVED, WETLAND OR STREAM BUFFERS, AND SENSITIVE SLOPES. CLEARING CONTROL FENCES ALONG WETLAND OR STREAM BUFFERS OR UPSLOPE OF SENSITIVE SLOPES SHALL BE ACCOMPANIED BY AN EROSION CONTROL FENCE. IF APPROVED BY THE CITY, A FOUR-FOOT HIGH ORANGE MESH CLEARING CONTROL FENCE MAY BE USED TO DELINEATE CLEARING LIMITS IN ALL OTHER AREAS.
20. OFF-SITE STREETS MUST BE KEPT CLEAN AT ALL TIMES. IF DIRT IS DEPOSITED ON THE PUBLIC STREET SYSTEM, THE STREET SHALL BE IMMEDIATELY CLEANED WITH POWER SWEEPER OR OTHER EQUIPMENT. ALL VEHICLES SHALL LEAVE THE SITE BY WAY OF THE CONSTRUCTION ENTRANCE AND SHALL BE CLEANED OF ALL DIRT THAT WOULD BE DEPOSITED ON THE PUBLIC STREETS.
21. ROCK FOR EROSION PROTECTION OF ROADWAY DITCHES, WHERE REQUIRED, MUST BE OF SOUND QUARRY ROCK, PLACED TO A DEPTH OF 1' AND MUST MEET THE FOLLOWING SPECIFICATIONS: 4"-8" ROCK/40%-70% PASSING; 2"-4" ROCK/30%-40% PASSING; AND 1"-2" ROCK/10%-20% PASSING. RECYCLED CONCRETE SHALL NOT BE USED FOR EROSION PROTECTION, INCLUDING CONSTRUCTION ENTRANCE OR TEMPORARY STABILIZATION ELSEWHERE ON THE SITE.
22. IF ANY PART(S) OF THE CLEARING LIMIT BOUNDARY OR TEMPORARY EROSION/SEDIMENTATION CONTROL PLAN IS/ARE DAMAGED, IT SHALL BE REPAIRED IMMEDIATELY.
23. ALL PROPERTIES ADJACENT TO THE PROJECT SITE SHALL BE PROTECTED FROM SEDIMENT DEPOSITION AND RUNOFF.
24. AT NO TIME SHALL MORE THAN 1' OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED IMMEDIATELY FOLLOWING REMOVAL OF EROSION CONTROL BMPS. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
25. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE PERMANENT FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION OR DISPERSION SYSTEM, THE FACILITY SHALL NOT BE USED AS A TEMPORARY SETTLING BASIN. NO UNDERGROUND DETENTION TANK, DETENTION VAULT, OR SYSTEM WHICH BACKS UNDER OR INTO A POND SHALL BE USED AS A TEMPORARY SETTLING BASIN.
26. ALL EROSION/SEDIMENTATION CONTROL PONDS WITH A DEAD STORAGE DEPTH EXCEEDING 6" MUST HAVE A PERIMETER FENCE WITH A MINIMUM HEIGHT OF 3'.
27. THE WASHED GRAVEL BACKFILL ADJACENT TO THE FILTER FABRIC FENCE SHALL BE REPLACED AND THE FILTER FABRIC CLEANED IF IT IS NONFUNCTIONAL BY EXCESSIVE SILT ACCUMULATION AS DETERMINED BY THE CITY OF KIRKLAND. ALSO, ALL INTERCEPTOR SWALES SHALL BE CLEANED IF SILT ACCUMULATION EXCEEDS ONE-QUARTER DEPTH.
28. PRIOR TO THE OCTOBER 1 OF EACH YEAR (THE BEGINNING OF THE WET SEASON), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. THE IDENTIFIED DISTURBED AREA SHALL BE SEEDED WITHIN ONE WEEK AFTER OCTOBER 1. A SITE PLAN DEPICTING THE AREAS TO BE SEEDED AND THE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE PUBLIC WORKS CONSTRUCTION INSPECTOR. THE INSPECTOR CAN REQUIRE SEEDING OF ADDITIONAL AREAS IN ORDER TO PROTECT SURFACE WATERS, ADJACENT PROPERTIES, OR DRAINAGE FACILITIES.
29. ANY AREA TO BE USED FOR INFILTRATION OR PERVIOUS PAVEMENT (INCLUDING A 5-FOOT BUFFER) MUST BE SURROUNDED BY SILT FENCE PRIOR TO CONSTRUCTION AND UNTIL FINAL STABILIZATION OF THE SITE TO PREVENT SOIL COMPACTION AND SILTATION BY CONSTRUCTION ACTIVITIES.
30. IF THE TEMPORARY CONSTRUCTION ENTRANCE OR ANY OTHER AREA WITH HEAVY VEHICLE LOADING IS LOCATED IN THE SAME AREA TO BE USED FOR INFILTRATION OR PERVIOUS PAVEMENT, 6" OF SEDIMENT BELOW THE GRAVEL SHALL BE REMOVED PRIOR TO INSTALLATION OF THE INFILTRATION FACILITY OR PERVIOUS PAVEMENT (TO REMOVE FINES ACCUMULATED DURING CONSTRUCTION).
31. ANY CATCH BASINS COLLECTING RUNOFF FROM THE SITE, WHETHER THEY ARE ON OR OFF THE SITE, SHALL HAVE ADEQUATE PROTECTION FROM SEDIMENT. CATCH BASINS DIRECTLY DOWNSTREAM OF THE CONSTRUCTION ENTRANCE OR ANY OTHER CATCH BASIN AS DETERMINED BY THE CITY INSPECTOR SHALL BE PROTECTED WITH A "STORM DRAIN PROTECTION INSERT" OR EQUIVALENT.
32. IF A SEDIMENT POND IS NOT PROPOSED, A BAKER TANK OR OTHER TEMPORARY GROUND AND/OR SURFACE WATER STORAGE TANK MAY BE REQUIRED DURING CONSTRUCTION, DEPENDING ON WEATHER CONDITIONS.
33. DO NOT FLUSH CONCRETE BY-PRODUCTS OR TRUCKS NEAR OR INTO THE STORM DRAINAGE SYSTEM. IF EXPOSED AGGREGATE IS FLUSHED INTO THE STORM SYSTEM, IT COULD MEAN RE-CLEANING THE ENTIRE DOWNSTREAM STORM SYSTEM, OR POSSIBLY RE-LAYING THE STORM LINE.
34. RECYCLED CONCRETE SHALL NOT BE STOCKPILED ON SITE, UNLESS FULLY COVERED WITH NO POTENTIAL FOR RELEASE OF RUNOFF.

STORM DRAINAGE

1. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
2. BEFORE ANY CONSTRUCTION MAY OCCUR, THE CONTRACTOR SHALL HAVE PLANS WHICH HAVE BEEN SIGNED AND APPROVED BY THE CITY OF KIRKLAND PUBLIC WORKS DEPARTMENT, OBTAINED ALL CITY, COUNTY, STATE, FEDERAL AND OTHER REQUIRED PERMITS, AND HAVE POSTED ALL REQUIRED BONDS.
3. ALL STORM DRAINAGE IMPROVEMENTS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF KIRKLAND PUBLIC WORKS PRE-APPROVED PLANS AND POLICIES AND THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, PREPARED BY WSDOT AND THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA).
4. ANY DEVIATION FROM THE APPROVED PLANS WILL REQUIRE WRITTEN APPROVAL, ALL CHANGES SHALL BE SUBMITTED TO THE CITY.
5. A COPY OF THE APPROVED STORM WATER PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
6. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED OR SIMILARLY STABILIZED TO THE SATISFACTION OF THE CITY OF KIRKLAND DEPARTMENT OF PUBLIC WORKS FOR THE PREVENTION OF ON-SITE EROSION AFTER THE COMPLETION OF CONSTRUCTION.
7. MINIMUM COVER OVER STORM DRAINAGE PIPES IN ROW OR VEHICULAR PATH SHALL BE 18 INCHES, UNLESS OTHER DESIGN IS APPROVED.
8. STEEL PIPE SHALL HAVE ASPHALT TREATMENT #1 OR BETTER INSIDE AND OUTSIDE.
9. ALL CATCH BASINS SHALL BE TYPE I UNLESS OTHERWISE NOTED. CATCH BASINS WITH A DEPTH OF OVER FIVE FEET (5') TO THE PIPE INVERT SHALL BE A TYPE II CATCH BASIN. TYPE II CATCH BASINS EXCEEDING FIVE FEET (5') IN DEPTH SHALL HAVE A STANDARD LADDER INSTALLED.
10. ALL STORM DRAINAGE MAIN EXTENSIONS WITHIN THE PUBLIC RIGHT-OF-WAY OR IN EASEMENTS MUST BE STAKED FOR LINE AND GRADE PRIOR TO STARTING CONSTRUCTION.
11. ROCK FOR EROSION PROTECTION OF ROADWAY DITCHES, WHERE REQUIRED, MUST BE OF SOUND QUARRY ROCK, PLACED TO A DEPTH OF ONE FOOT (1') AND MUST MEET THE FOLLOWING SPECIFICATIONS: 4"-8" ROCK/40%-70% PASSING; 2"-4" ROCK/30%-40% PASSING; 2"-MINUS ROCK/10%-20% PASSING. RECYCLED CONCRETE SHALL NOT BE USED FOR EROSION PROTECTION, INCLUDING FOR CONSTRUCTION ENTRANCE OR TEMPORARY STABILIZATION ELSEWHERE ON SITE.
12. ALL PIPE, MANHOLES, CATCH BASINS, AND APPURTENANCES SHALL BE LAID ON A PROPERLY PREPARED FOUNDATION IN ACCORDANCE WITH THE CURRENT STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (WSDOT). THIS SHALL INCLUDE NECESSARY LEVELING OF THE TRENCH BOTTOM OR THE TOP OF THE FOUNDATION MATERIAL AS WELL AS PLACEMENT AND COMPACTION OF REQUIRED BEDDING MATERIAL TO UNIFORM GRADE SO THAT THE ENTIRE LENGTH OF THE PIPE WILL BE SUPPORTED ON A UNIFORMLY DENSE, UNYIELDING BASE. IF THE NATIVE MATERIAL IN THE BOTTOM OF THE TRENCH MEETS THE REQUIREMENTS FOR "GRAVEL BACKFILL FOR PIPE BEDDING," THE FIRST LIFT OF PIPE BEDDING MAY BE OMITTED PROVIDED THE MATERIAL IN THE BOTTOM OF THE TRENCH IS LOOSENED, REGRADED, AND COMPACTED TO FORM A DENSE UNYIELDING BASE. ALL PIPE BEDDING SHALL BE APWA CLASS B, TYPE I, OR BETTER. PIPE SHALL NOT BE INSTALLED ON SOD, FROZEN EARTH, LARGE BOULDERS, OR ROCK. PIPE BEDDING FOR FLEXIBLE PIPES SHALL BE PEA GRAVEL TO THE SPRINGLINE OF THE PIPE.
13. CONSTRUCTION OF DEWATERING DISCHARGES SHALL ALWAYS MEET WATER QUALITY GUIDELINES LISTED IN COK POLICY E-1. SPECIFICALLY, DISCHARGES TO THE PUBLIC STORMWATER DRAINAGE SYSTEM MUST BE BELOW 25NTU, AND NOT CONSIDERED A PROHIBITED DISCHARGE (PER KMC 15.52.090). TEMPORARY DISCHARGES TO SANITARY SEWER REQUIRE PRIOR AUTHORIZATION AND PERMIT FROM KING COUNTY INDUSTRIAL WASTE PROGRAM (206-263-3000) AND NOTIFICATION TO THE PUBLIC WORKS CONSTRUCTION INSPECTOR.
14. ISSUANCE OF A BUILDING OR LAND SURFACE MODIFICATION PERMIT BY THE CITY OF KIRKLAND DOES NOT RELIEVE THE OWNER OF THE CONTINUING LEGAL OBLIGATION AND/OR LIABILITY CONNECTED WITH STORM SURFACE WATER DISPOSITION. FURTHER, THE CITY OF KIRKLAND DOES NOT ACCEPT ANY OBLIGATION FOR THE PROPER FUNCTIONING AND MAINTENANCE OF THE SYSTEM DURING OR FOLLOWING CONSTRUCTION EXCEPT AS OUTLINED IN THE CITY OF KIRKLAND PUBLIC WORKS STANDARDS.
15. ALL TRENCH BACKFILL SHALL BE COMPACTED TO 95 PERCENT DENSITY IN ROADWAYS, ROADWAY SHOULDERS, ROADWAY PRISM AND DRIVEWAYS, AND 85 PERCENT DENSITY IN UNPAVED AREAS. ALL PIPE ZONE COMPACTION SHALL BE 95 PERCENT.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, CONFINED SPACE PROTECTION, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACT. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE A TRAFFIC CONTROL PLAN APPROVED BY THE CITY OF KIRKLAND. ALL SECTIONS OF THE WSDOT STANDARD SPECIFICATIONS, TRAFFIC CONTROL, AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL APPLY.
17. NO FINAL CUT OR FILL SLOPE SHALL EXCEED SLOPES OF TWO (2) HORIZONTAL TO ONE (1) VERTICAL WITHOUT STABILIZATION BY ROCKERY OR BY A STRUCTURAL RETAINING WALL.
18. ALL MANHOLE LADDERS SHALL BE FIRMLY ATTACHED AND EXTEND TO WITHIN 1' OF THE BOTTOM OF THE STRUCTURE.
19. APPROXIMATE LOCATIONS OF EXISTING UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND ARE SHOWN FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF EXISTING UTILITY LOCATIONS WHETHER OR NOT THESE UTILITIES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXERCISE ALL CARE TO AVOID DAMAGE TO ANY UTILITY. IF CONFLICTS WITH EXISTING UTILITIES ARISE DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY CONSTRUCTION INSPECTOR AND ANY CHANGES REQUIRED SHALL BE APPROVED BY THE DEVELOPMENT ENGINEER PRIOR TO COMMENCEMENT OF RELATED CONSTRUCTION ON THE PROJECT.
20. THE UNDERGROUND UTILITY LOCATION SERVICE SHALL BE CONTACTED FOR FIELD LOCATION OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. THE OWNER OR HIS REPRESENTATIVE SHALL BE CONTACTED IF A UTILITY CONFLICT EXISTS. FOR UTILITY LOCATION IN KING COUNTY, CALL 1-800-424-5555. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT UTILITY LOCATES ARE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT.
21. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, WIDTHS, THICKNESSES, AND ELEVATIONS OF ALL EXISTING PAVEMENTS AND STRUCTURES THAT ARE TO INTERFACE WITH NEW WORK. 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, ACCEPTABLE TO THE ENGINEER AND THE CITY OF KIRKLAND, COMPLETE IN PLACE AND READY TO USE.
22. ALL INLET, MANHOLE, AND CATCH BASIN FRAMES AND GRATES SHALL NOT BE ADJUSTED TO GRADE UNTIL IMMEDIATELY PRIOR TO FINAL PAVING. ALL CATCH BASIN GRATES SHALL BE SET 0.10' BELOW PAVEMENT LEVEL.
23. OPEN CUT ROAD CROSSINGS FOR UTILITY TRENCHES ON EXISTING TRAVELED ROADWAY SHALL BE BACKFILLED ONLY WITH 5/8" MINUS CRUSHED ROCK AND MECHANICALLY COMPACTED (UNLESS OTHERWISE APPROVED BY THE CITY). FOR STREETS CLASSIFIED AS ARTERIALS OR COLLECTORS, BACKFILL FOR CROSSINGS SHALL BE CDF. CUTS INTO THE EXISTING ASPHALT SHALL BE NEAT LINE CUT WITH SAW OR JACKHAMMER IN A CONTINUOUS LINE. A TEMPORARY COLD MIX PATCH MUST BE PLACED IMMEDIATELY AFTER BACKFILL AND COMPACTION. A PERMANENT HOT MIX PATCH SHALL BE PLACED WITHIN 30 DAYS AND SHALL BE A MINIMUM OF 1" THICKER THAN THE ORIGINAL ASPHALT WITH A MINIMUM THICKNESS OF 2". SEE STANDARD D.02.
24. ALL DAMAGES INCURRED TO PUBLIC AND/OR PRIVATE PROPERTY BY THE CONTRACTOR DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPAIRED TO THE SATISFACTION OF THE CITY CONSTRUCTION INSPECTOR BEFORE PROJECT APPROVAL AND/OR THE RELEASE OF THE PROJECT'S PERFORMANCE BOND.
25. GROUT ALL SEAMS AND OPENINGS IN ALL INLETS, CATCH BASINS, AND MANHOLES. JETSET GROUT IS NOT ALLOWED.
26. WHEN WIDENING AN EXISTING ROADWAY WHERE AN EXISTING TYPE I CATCH BASIN WILL REMAIN IN THE TRAVEL LANE, THE EXISTING FRAME AND COVER SHALL BE REPLACED WITH A ROUND, LOCKING FRAME AND COVER.
27. FOR OTHER THAN SINGLE-FAMILY DWELLINGS, ALL EXPOSED OR READILY EXPOSED INDOOR STORM DRAINAGE PIPING/PLUMBING SHALL BE LABELED WITH THE WORDS "STORM DRAIN" WITH MINIMUM 2-INCH HIGH LETTERS.
28. RECYCLED CONCRETE SHALL NOT BE USED AROUND STORMWATER FACILITIES.
29. ALL FASTENERS (BOLTS, NUTS, WASHERS, ETC.) ON MANHOLE AND CATCH BASIN LIDS TO BE STANDARD SIZE. NO METRIC FASTENERS ALLOWED.

ROADWAY

1. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
2. ALL ROADWAY WORK AND MATERIAL SHALL BE IN ACCORDANCE WITH THE CURRENT APWA AND CITY OF KIRKLAND STANDARDS AND SPECIFICATIONS.
3. ALL PUBLIC ROADWAYS SHALL BE CONSTRUCTED OF 2" CLASS "B" AC PAVING ON 4" ASPHALT-TREATED BASE (ATB), UNLESS OTHERWISE APPROVED BY THE PUBLIC WORKS DEPARTMENT.
4. A COPY OF THE APPROVED ROADWAY PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
5. DENSITY TEST REPORTS WILL BE REQUIRED FOR ALL PUBLIC ROADWAYS AND ALL PRIVATE ROADWAYS WITHIN PLATS. ALL TRENCH BACKFILL SHALL BE COMPACTED TO 95 PERCENT DENSITY IN ROADWAYS, ROADWAY SHOULDERS, ROADWAY PRISM AND DRIVEWAYS, AND 85 PERCENT DENSITY IN UNPAVED AREAS. ALL PIPE ZONE COMPACTION SHALL BE 95 PERCENT.
6. ALL COMMERCIAL AND RESIDENTIAL DRIVEWAYS MUST CONFORM TO THE CITY OF KIRKLAND DEPARTMENT OF PUBLIC WORKS DRIVEWAY POLICY.
7. ALL CONCRETE FOR SIDEWALKS AND CURB AND GUTTER MUST BE 4,000 PSI MINIMUM. (5-3/4 SACK MIX.)
8. IN THE CASE OF NEW ROAD CONSTRUCTION OR RECONSTRUCTION REQUIRING MAILBOXES TO BE MOVED OR REARRANGED, THE DEVELOPER/CONTRACTOR SHALL COORDINATE WITH THE U.S. POSTAL SERVICE FOR THE NEW LOCATION OF THE MAILBOX STRUCTURE.
9. ANY ROADWAY SIGNAGE OR STRIPING REMOVED OR TEMPORARILY MOVED BY THE CONTRACTOR SHALL BE RESTORED TO MEET THE CURRENT CITY OF KIRKLAND STANDARDS.
10. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ADEQUATE TEMPORARY TRAFFIC CONTROL TO ENSURE TRAFFIC SAFETY DURING CONSTRUCTION ACTIVITIES. THEREFORE, THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE PUBLIC WORKS DEPARTMENT AT LEAST 48 HOURS PRIOR TO STARTING ANY WORK IN THE RIGHT-OF-WAY. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) OR AS MODIFIED BY THE TRAFFIC ENGINEER.
11. WHERE A SIDEWALK IS TO BE CONSTRUCTED ABOVE A SLOPE OR ADJACENT TO A ROCKERY OR RETAINING WALL WHERE THE LOWEST FINISHED ELEVATION OF THE SLOPE, ROCKERY, OR RETAINING WALL IS TO BE THIRTY INCHES (30") OR MORE BELOW THE FINISHED ELEVATION OF THE SIDEWALK, A SAFETY RAILING SHALL BE REQUIRED WHEN: (A) THE PLANE OF THE WALL FACE IS LESS THAN 4' IN HORIZONTAL DISTANCE FROM THE OUTSIDE EDGE OF THE SIDEWALK; (B) THE SLOPES ADJACENT TO THE SIDEWALK AVERAGE GREATER THAN TWO TO ONE.
12. THE MAXIMUM GRADE FOR PRIVATE ROADWAYS SHALL BE TWENTY PERCENT (20%), OR FIFTEEN PERCENT (15%) IF USED FOR FIRE ACCESS. FOR PUBLIC ROADWAYS, THE MAXIMUM GRADE SHALL BE FIFTEEN PERCENT (15%).
13. DEAD-END STREETS SHALL BE APPROPRIATELY SIGNED AND BARRICADED. SEE MOST CURRENT EDITION OF THE MUTCD.
14. SIDEWALK AND CURB AND GUTTER CANNOT BE POURED MONOLITHICALLY. THERE MUST BE A COLD JOINT OR FULL-DEPTH EXPANSION JOINT BETWEEN THEM.
15. MEASURES SHALL BE TAKEN BY THE DEVELOPER TO PROVIDE GROUND COVER IN AREAS WITHIN THE RIGHT-OF-WAY WHICH HAVE BEEN STRIPPED OF NATURAL VEGETATION OR HAVE A POTENTIAL FOR EROSION.
16. THE DEVELOPER SHALL COORDINATE WITH PUGET POWER FOR THE DESIGN AND INSTALLATION OF STREET LIGHTS ON ALL NEWLY-CREATED PUBLIC ROADWAYS AND EXISTING ROADWAYS.
17. WHEN AN EXISTING ROADWAY IS TO RECEIVE A HALF-STREET OVERLAY, THE EXISTING ROADWAY MUST BE COLD PLANED AT THE EDGE OF THE GUTTER AND CENTERLINE. WHEN THE EXISTING ROADWAY IS TO RECEIVE A FULL-STREET OVERLAY, IT MUST BE COLD PLANED AT THE EDGE OF BOTH GUTTERS. SEE CITY OF KIRKLAND STANDARD DETAIL NO. R.13.
18. ALL NEW SIGNS REQUIRED IN THE PUBLIC RIGHT-OF-WAY MUST BE PURCHASED FROM, AND INSTALLED BY, THE CITY OF KIRKLAND PUBLIC WORKS DEPARTMENT.
19. WHEN INSTALLING NEW SIDEWALK, THE AREA BEHIND THE SIDEWALK MUST BE GRADED SO THAT THE YARD DRAINAGE DOES NOT DRAIN OVER THE SIDEWALK.
20. ANY EXISTING PUBLIC IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED PRIOR TO FINAL INSPECTION.
21. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL PUBLIC STREETS FREE FROM MUD AND DEBRIS AT ALL TIMES. THE CONTRACTOR SHALL BE PREPARED TO USE POWER SWEEPERS OR OTHER PIECES OF EQUIPMENT NECESSARY TO KEEP THE ROADWAYS CLEAN.
22. BACKFILL IN ALL STREET CUTS ON ARTERIALS WILL BE CONTROL DENSITY FILL (CDF). CONTRACTOR MUST PROVIDE STEEL PLATING NECESSARY TO ALLOW THE CDF TO CURE.
23. WHEN CONSTRUCTING NEW CURB AND GUTTER WHICH DOES NOT ALIGN WITH THE EXISTING EDGE OF PAVEMENT, THE ROADWAY MUST BE TAPERED FROM THE ENDS OF THE NEW CURB AND GUTTER TO MATCH THE EXISTING PAVEMENT. THE ENTRY TAPER INTO THE NEW IMPROVEMENTS SHALL BE 5:1 AND LEAVING THE NEW IMPROVEMENTS SHALL BE 10:1.
24. WHEN AN EXISTING ROADWAY IS TO BE WIDENED, THE EXISTING PAVEMENT MUST BE SAW CUT AT LEAST ONE FOOT FROM THE EDGE TO PROVIDE A PROPER MATCH BETWEEN NEW AND EXISTING ASPHALT. HOWEVER, WHEN THE EXISTING PAVEMENT CONTAINS ALLIGATORED AREAS, THOSE AREAS MUST BE REMOVED PRIOR TO WIDENING. ALL SAW CUTS SHALL BE PARALLEL OR PERPENDICULAR TO THE RIGHT-OF-WAY CENTERLINE.
25. ALL ROCKERIES MUST BE CONSTRUCTED IN ACCORDANCE WITH THE MOST CURRENT GUIDELINES OF THE ASSOCIATION.

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
0	BID SET	PCE	MJH	12/27/23

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MATTHEW J. HOUGH, STATE OF WASHINGTON, 36495, REGISTERED PROFESSIONAL ENGINEER 1/04/2024

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KIRKLAND, WA 98033-6189 (206)828-1243
(206)828-1243

GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

CITY OF KIRKLAND STANDARD PLAN NOTES

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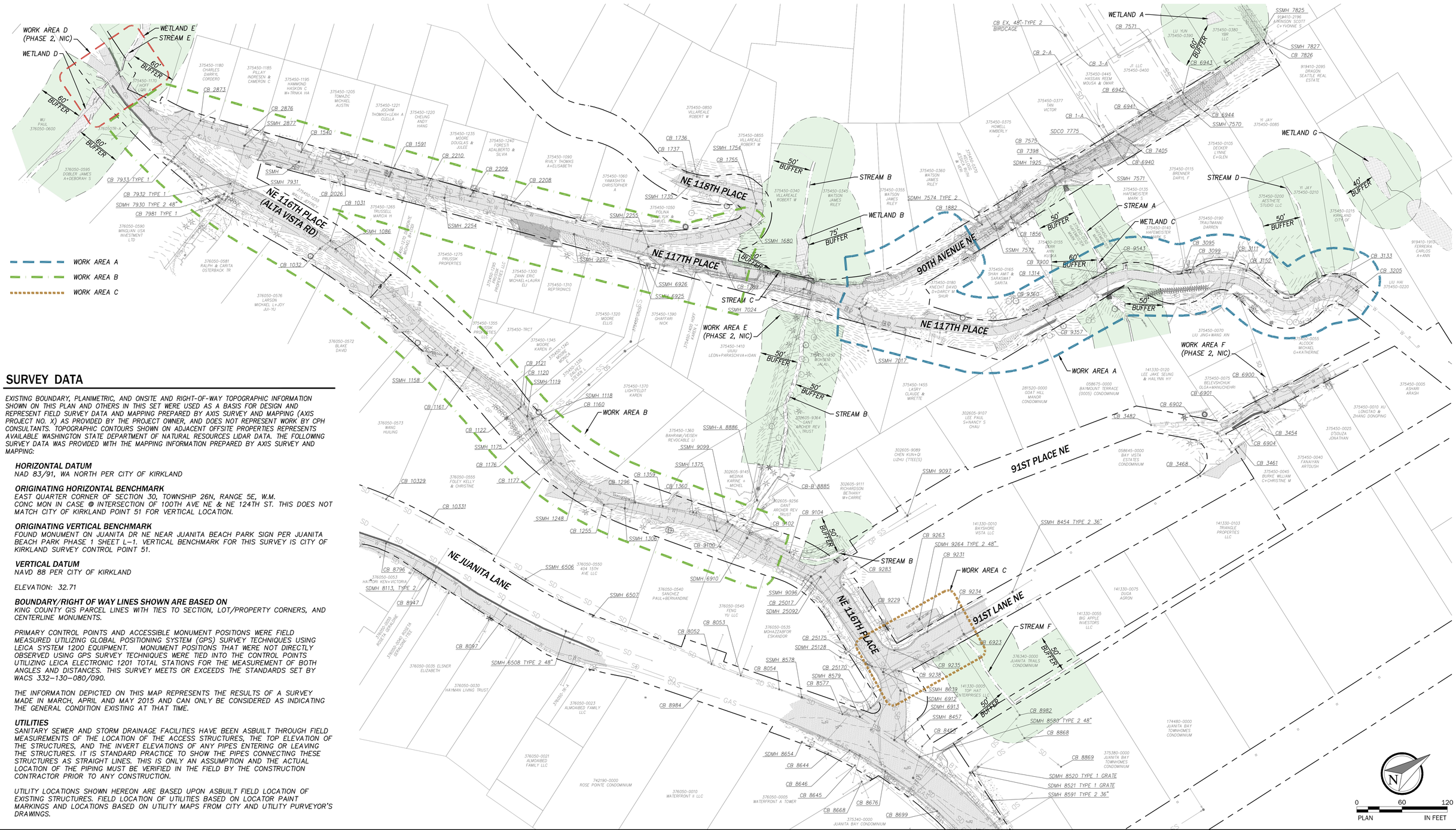

SURVEY DATA

EXISTING BOUNDARY, PLANIMETRIC, AND ONSITE AND RIGHT-OF-WAY TOPOGRAPHIC INFORMATION SHOWN ON THIS PLAN AND OTHERS IN THIS SET WERE USED AS A BASIS FOR DESIGN AND REPRESENT FIELD SURVEY DATA AND MAPPING PREPARED BY AXIS SURVEY AND MAPPING (AXIS PROJECT NO. X) AS PROVIDED BY THE PROJECT OWNER, AND DOES NOT REPRESENT WORK BY CPH CONSULTANTS. TOPOGRAPHIC CONTOURS SHOWN ON ADJACENT OFFSITE PROPERTIES REPRESENTS AVAILABLE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES LIDAR DATA. THE FOLLOWING SURVEY DATA WAS PROVIDED WITH THE MAPPING INFORMATION PREPARED BY AXIS SURVEY AND MAPPING:

HORIZONTAL DATUM
NAD 83/91, WA NORTH PER CITY OF KIRKLAND

ORIGINATING HORIZONTAL BENCHMARK
EAST QUARTER CORNER OF SECTION 30, TOWNSHIP 26N, RANGE 5E, W.M. CONC MON IN CASE @ INTERSECTION OF 100TH AVE NE & NE 124TH ST. THIS DOES NOT MATCH CITY OF KIRKLAND POINT 51 FOR VERTICAL LOCATION.

ORIGINATING VERTICAL BENCHMARK
FOUND MONUMENT ON JUANITA DR NE NEAR JUANITA BEACH PARK SIGN PER JUANITA BEACH PARK PHASE 1 SHEET L-1. VERTICAL BENCHMARK FOR THIS SURVEY IS CITY OF KIRKLAND SURVEY CONTROL POINT 51.

VERTICAL DATUM
NAVD 88 PER CITY OF KIRKLAND

ELEVATION: 32.71

BOUNDARY/RIGHT OF WAY LINES SHOWN ARE BASED ON
KING COUNTY GIS PARCEL LINES WITH TIES TO SECTION, LOT/PROPERTY CORNERS, AND CENTERLINE MONUMENTS.

PRIMARY CONTROL POINTS AND ACCESSIBLE MONUMENT POSITIONS WERE FIELD MEASURED UTILIZING GLOBAL POSITIONING SYSTEM (GPS) SURVEY TECHNIQUES USING LEICA SYSTEM 1200 EQUIPMENT. MONUMENT POSITIONS THAT WERE NOT DIRECTLY OBSERVED USING GPS SURVEY TECHNIQUES WERE TIED INTO THE CONTROL POINTS UTILIZING LEICA ELECTRONIC 1201 TOTAL STATIONS FOR THE MEASUREMENT OF BOTH ANGLES AND DISTANCES. THIS SURVEY MEETS OR EXCEEDS THE STANDARDS SET BY WACS 332-130-080/090.

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN MARCH, APRIL AND MAY 2015 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME.

UTILITIES
SANITARY SEWER AND STORM DRAINAGE FACILITIES HAVE BEEN ASBUILT THROUGH FIELD MEASUREMENTS OF THE LOCATION OF THE ACCESS STRUCTURES, THE TOP ELEVATION OF THE STRUCTURES, AND THE INVERT ELEVATIONS OF ANY PIPES ENTERING OR LEAVING THE STRUCTURES. IT IS STANDARD PRACTICE TO SHOW THE PIPES CONNECTING THESE STRUCTURES AS STRAIGHT LINES. THIS IS ONLY AN ASSUMPTION AND THE ACTUAL LOCATION OF THE PIPING MUST BE VERIFIED IN THE FIELD BY THE CONSTRUCTION CONTRACTOR PRIOR TO ANY CONSTRUCTION.

UTILITY LOCATIONS SHOWN HEREON ARE BASED UPON ASBUILT FIELD LOCATION OF EXISTING STRUCTURES. FIELD LOCATION OF UTILITIES BASED ON LOCATOR PAINT MARKINGS AND LOCATIONS BASED ON UTILITY MAPS FROM CITY AND UTILITY PURVEYOR'S DRAWINGS.

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
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MATTHEW J. HOUCK, STATE OF WASHINGTON, 36425, REGISTERED PROFESSIONAL ENGINEER, 1/04/2024

CITY OF KIRKLAND WASHINGTON

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PUBLIC WORKS DEPARTMENT
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KIRKLAND, WA 98033-6189 (206)828-1243
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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

EXISTING CONDITIONS

C0.10

4 / 51

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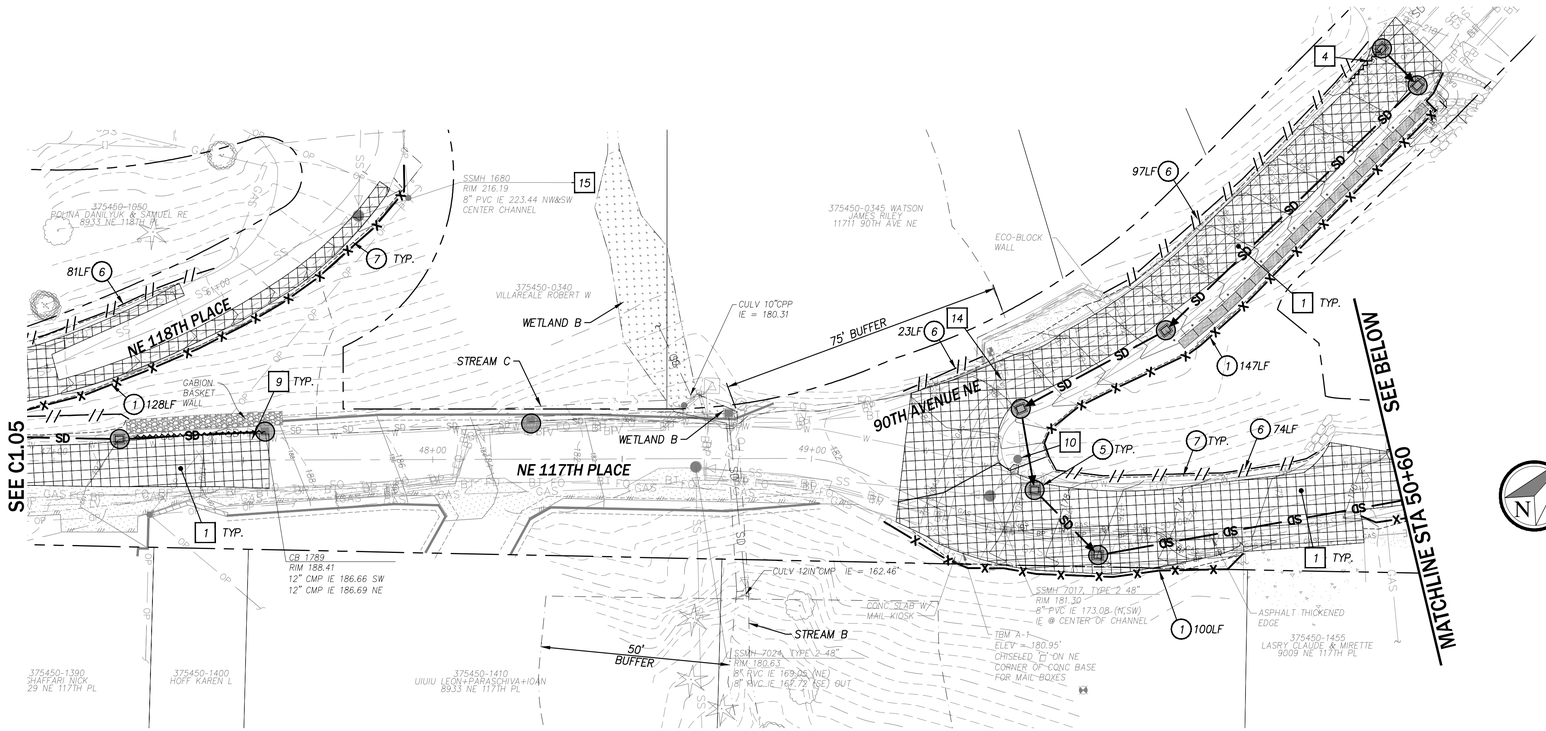

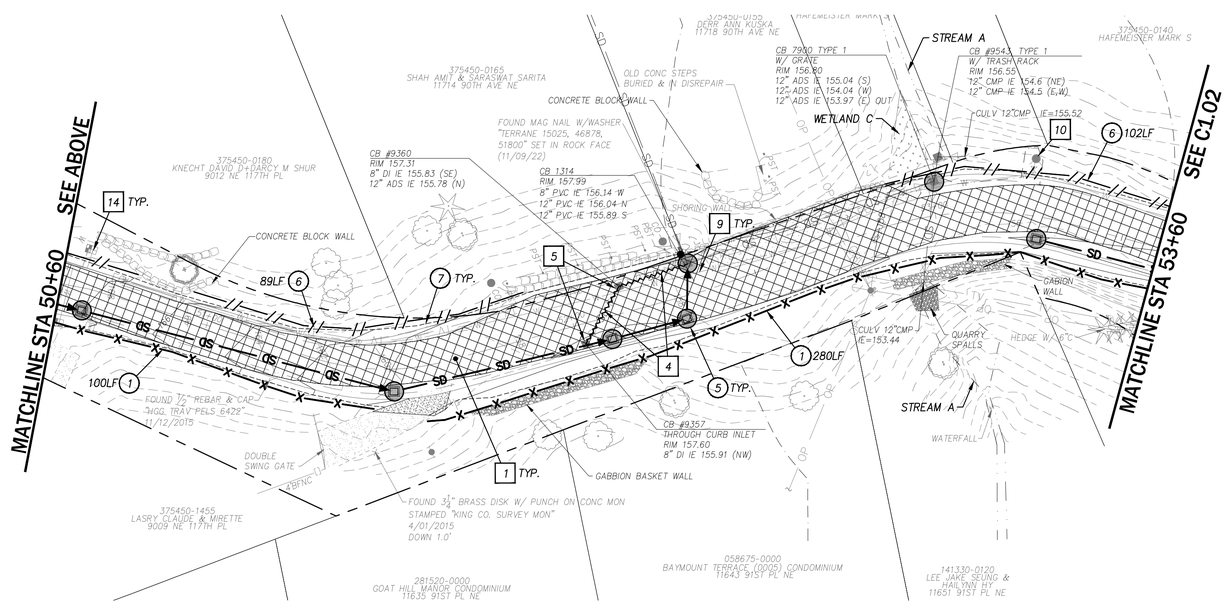

CONSTRUCTION NOTES

1. SILT FENCE PER COK PLAN NO. CK-E.03
2. NETS, BLANKETS, TEMP. STABILIZATION PER COK PLAN NO. CK-E.06
3. CHECK DAM PER COK PLAN NO. CK-E.07
4. STRAW WATTLES PER COK PLAN NO. CK-E.10
5. STORM DRAIN PROTECTION INSERT PER COK PLAN NO. CK-E.11
6. HIGH VISIBILITY FENCE PER WSDOT STD. PLAN I-10.10-01
7. APPROX. LIMITS OF GRADING

DEMOLITION NOTES

1. REMOVE EXIST. AC PAVEMENT
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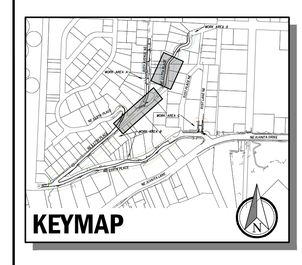
11. REMOVE EXIST. 2" GAS MAIN, RELOCATE PER PSE
12. REMOVE EXIST. BURIED POWER/COMM, RELOCATE PER PURVEYOR
13. ABANDON EXIST. SD FACILITY
14. PROTECT EXIST. WATER SERVICE
15. PROTECT EXIST. UTILITY FEATURE
16. PROTECT EXIST. LANDSCAPING
17. PROTECT EXIST. SIGN
18. PROTECT EXIST. SD FACILITY

LEGEND

- APPROX. LIMIT OF GRADING
- SILT FENCE
- HIGH VISIBILITY CONSTRUCTION FENCE
- TEMP. CHAIN-LINK CONSTRUCTION FENCE
- FUTURE STORM DRAIN PIPE
- EXIST. STORM DRAIN PIPE
- TYPE 1 CATCH BASIN W/STANDARD GRATE
- STORM DRAINAGE PROTECTION INSERT
- REMOVE EXIST. SD PIPE
- REMOVE AND REPLACE HMA PAVEMENT SECTION

NOTE: SEE CITY OF KIRKLAND STANDARD PLAN NOTES ON C0.02 FOR ADDITIONAL TEMPORARY EROSION CONTROL SPECIFICATIONS AND REQUIREMENTS.



0 20 40
PLAN IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
0	BID SET	PCE	MJH	12/27/23

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Wenatchee, WA 98801 • (509) 293-7731
www.cphconsultants.com

MATTHEW J. HOBBS, STATE OF WASHINGTON, 46656, REGISTERED PROFESSIONAL ENGINEER, 1/04/2024

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PUBLIC WORKS DEPARTMENT
123 FIFTH AVENUE KIRKLAND, WA
KIRKLAND, WA 98033-6189 (206)828-1243
(206)828-1243

GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION - PHASE 1

TESC AND DEMO PLAN

C1.01

5 / 51

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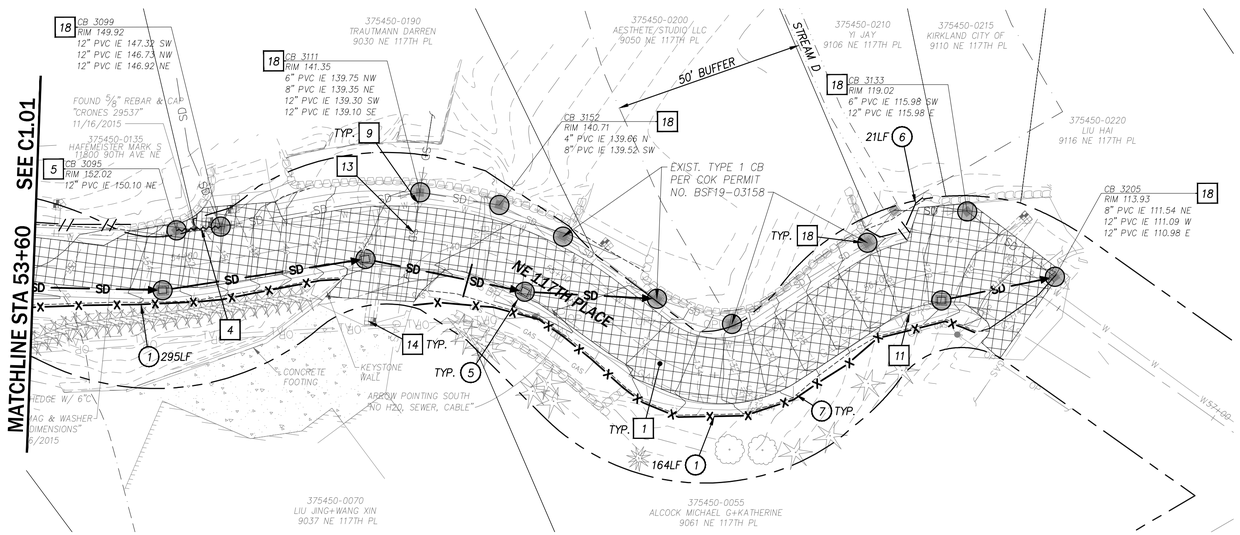

CONSTRUCTION NOTES

1. SILT FENCE PER COK PLAN NO. CK-E.03
2. NETS, BLANKETS, TEMP. STABILIZATION PER COK PLAN NO. CK-E.06
3. CHECK DAM PER COK PLAN NO. CK-E.07
4. STRAW WATTLES PER COK PLAN NO. CK-E.10
5. STORM DRAIN PROTECTION INSERT PER COK PLAN NO. CK-E.11
6. HIGH VISIBILITY FENCE PER WSDOT STD. PLAN I-10.10-01
7. APPROX. LIMITS OF GRADING

DEMOLITION NOTES

1. REMOVE EXIST. AC PAVEMENT
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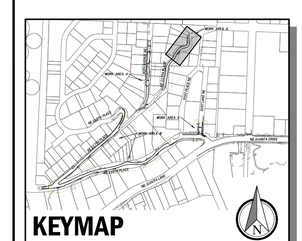

PLAN 0 20 40 IN FEET

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C1.02

6 / 51

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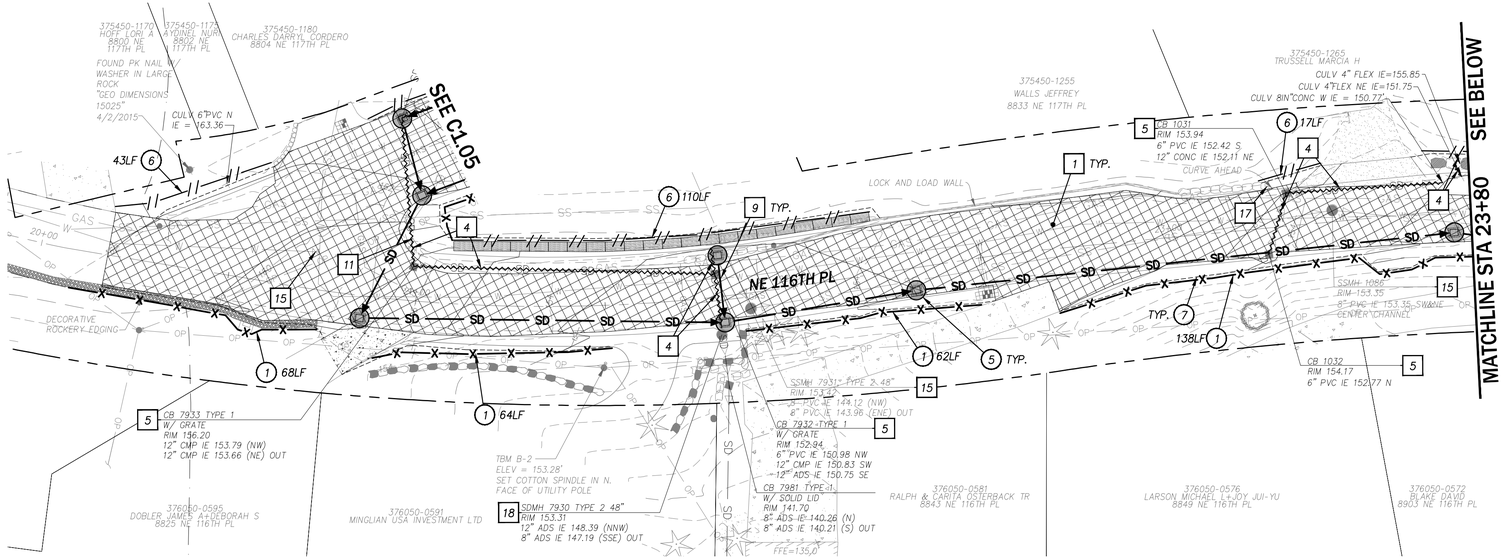

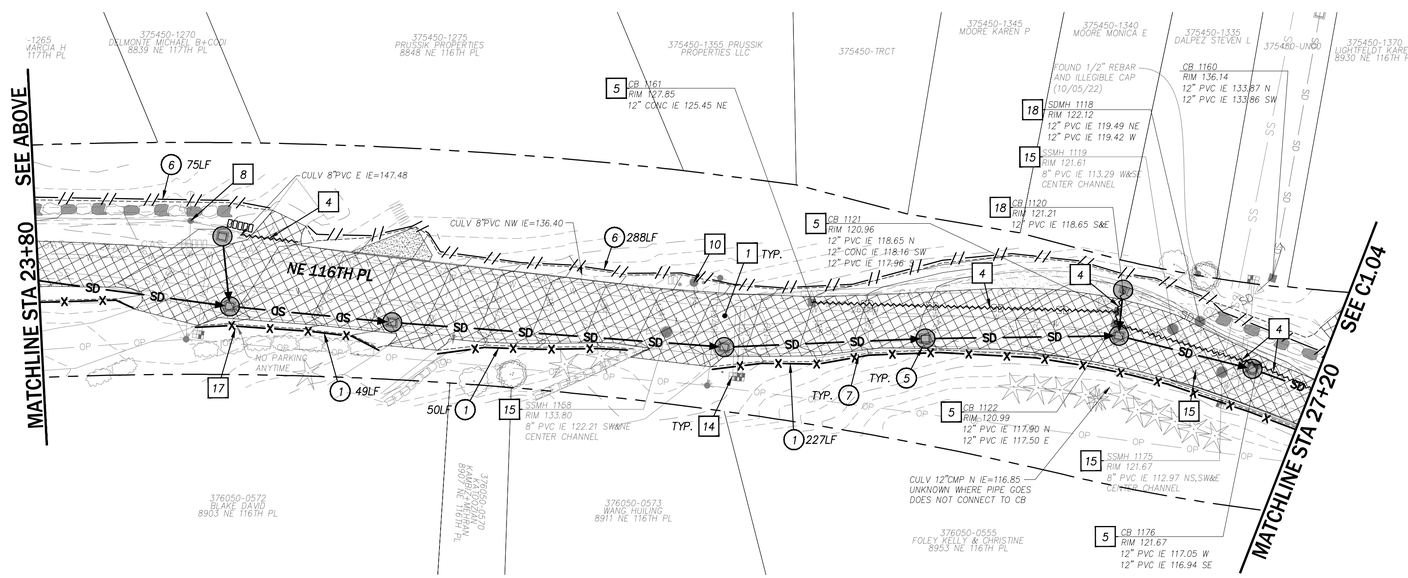

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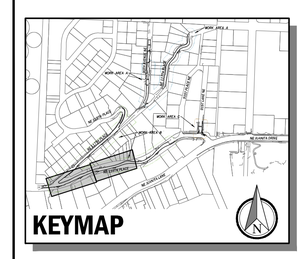
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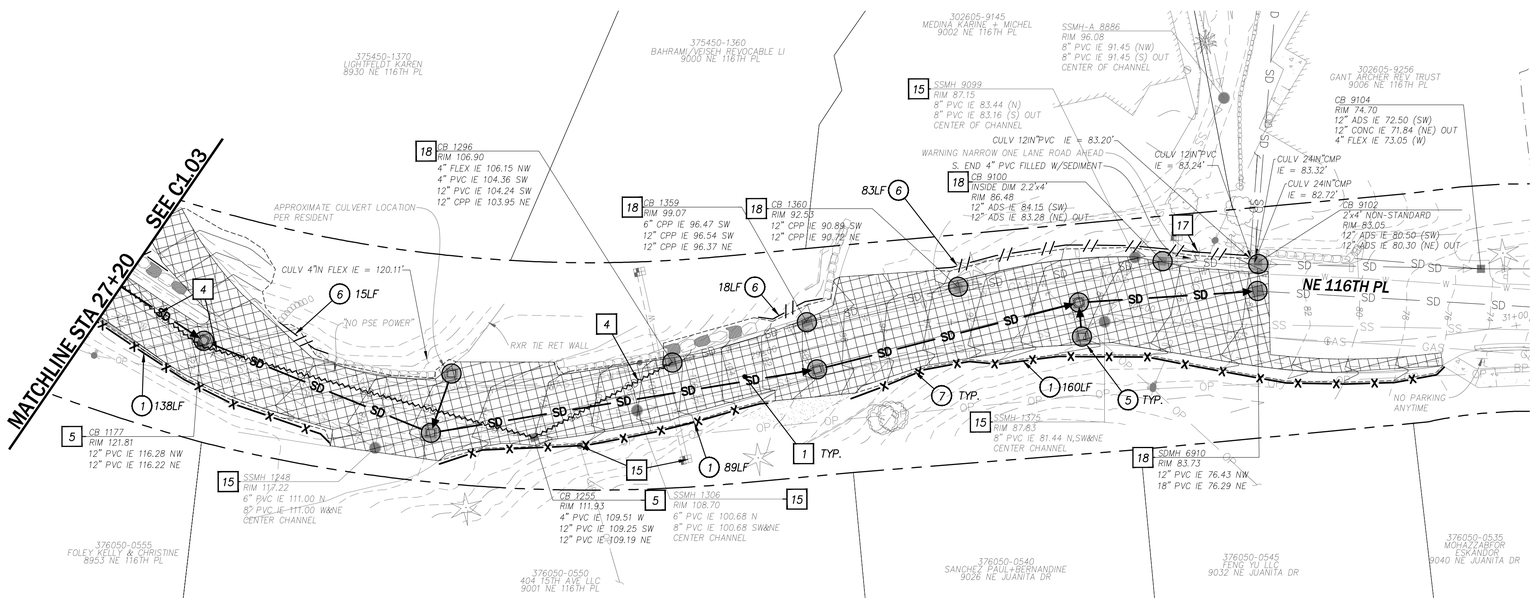


CONSTRUCTION NOTES

1. SILT FENCE PER COK PLAN NO. CK-E.03
2. NETS, BLANKETS, TEMP. STABILIZATION PER COK PLAN NO. CK-E.06
3. CHECK DAM PER COK PLAN NO. CK-E.07
4. STRAW WATTLES PER COK PLAN NO. CK-E.10
5. STORM DRAIN PROTECTION INSERT PER COK PLAN NO. CK-E.11
6. HIGH VISIBILITY FENCE PER WSDOT STD. PLAN I-10.10-01
7. APPROX. LIMITS OF GRADING

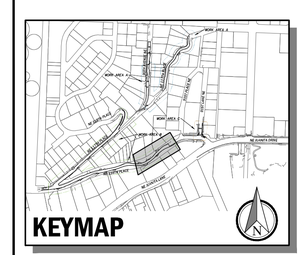
DEMOLITION NOTES

1. REMOVE EXIST. AC PAVEMENT
2. REMOVE EXIST. CONC. CURB AND GUTTER
3. REMOVE EXIST. CONC. SIDEWALK
4. REMOVE EXIST. SD PIPE
5. REMOVE EXIST. SD STRUCTURE
6. REMOVE EXIST. WALL/ROCKERY
7. REMOVE EXIST. TREE
8. REMOVE EXIST. GUY POLE, RELOCATE PER C3.07
9. PROTECT EXIST. 8" DI WATER MAIN
10. PROTECT EXIST. FIRE HYDRANT
11. REMOVE EXIST. 2" GAS MAIN, RELOCATE PER PSE
12. REMOVE EXIST. BURIED POWER/COMM, RELOCATE PER PURVEYOR
13. ABANDON EXIST. SD FACILITY
14. PROTECT EXIST. WATER SERVICE
15. PROTECT EXIST. UTILITY FEATURE
16. PROTECT EXIST. LANDSCAPING
17. PROTECT EXIST. SIGN
18. PROTECT EXIST. SD FACILITY

LEGEND

- APPROX. LIMIT OF GRADING
- SILT FENCE
- HIGH VISIBILITY CONSTRUCTION FENCE
- TEMP. CHAIN-LINK CONSTRUCTION FENCE
- FUTURE STORM DRAIN PIPE
- EXIST. STORM DRAIN PIPE
- TYPE 1 CATCH BASIN W/STANDARD GRATE
- STORM DRAINAGE PROTECTION INSERT
- REMOVE EXIST. SD PIPE
- REMOVE AND REPLACE HMA PAVEMENT SECTION

NOTE: SEE CITY OF KIRKLAND STANDARD PLAN NOTES ON C0.02 FOR ADDITIONAL TEMPORARY EROSION CONTROL SPECIFICATIONS AND REQUIREMENTS.



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STATE OF WASHINGTON
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REGISTERED PROFESSIONAL ENGINEER
1/04/2024

CITY OF KIRKLAND WASHINGTON

CITY OF KIRKLAND
PUBLIC WORKS DEPARTMENT
123 FIFTH AVENUE KIRKLAND, WA
KIRKLAND, WA 98033-6189 (206)828-1243
(206)828-1243

GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

TESC AND DEMO PLAN

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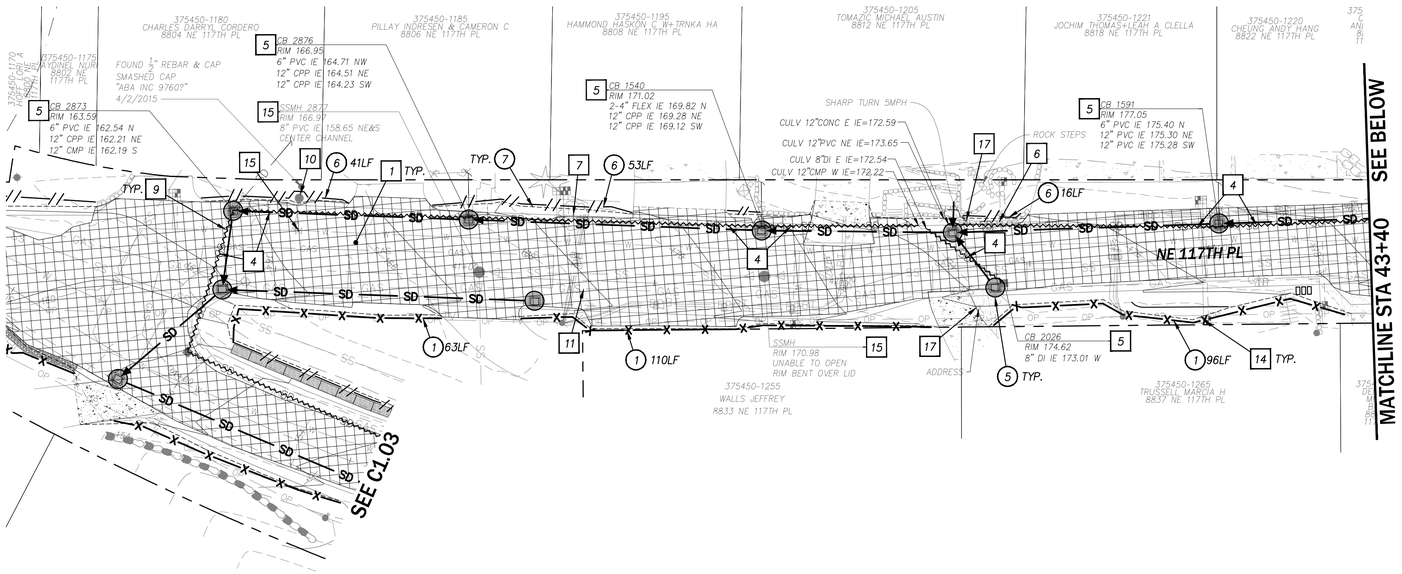

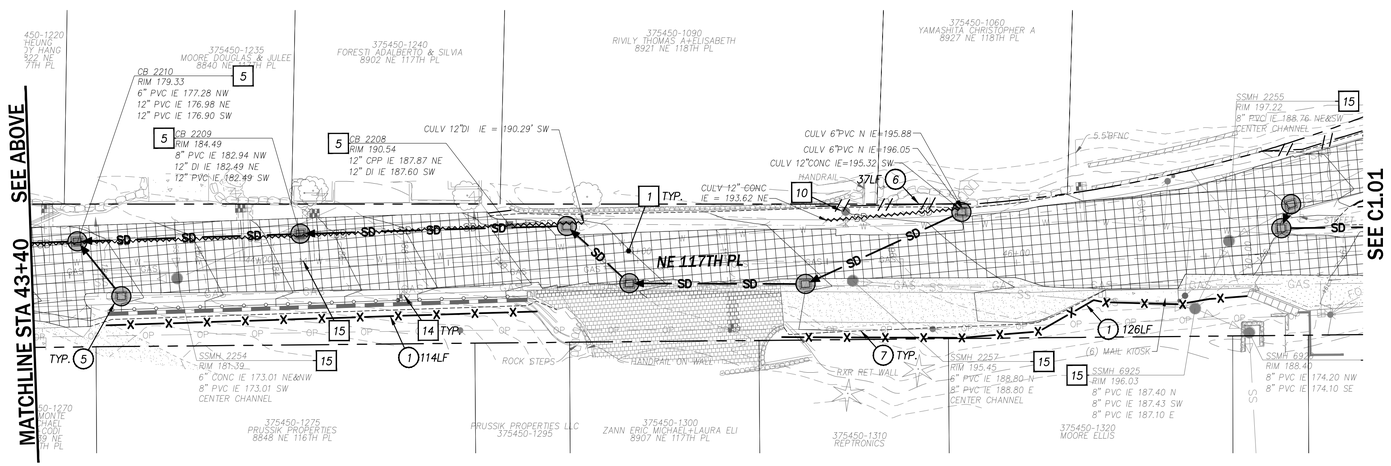

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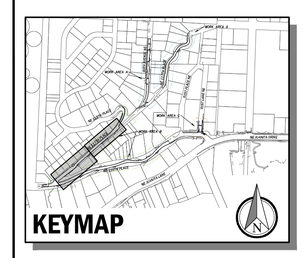
- REMOVE AND REPLACE HMA PAVEMENT SECTION

NOTE: SEE CITY OF KIRKLAND STANDARD PLAN NOTES ON C0.02 FOR ADDITIONAL TEMPORARY EROSION CONTROL SPECIFICATIONS AND REQUIREMENTS.



0 20 40
PLAN IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
0	BID SET	PCE	MJH	12/27/23

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MATTHEW J. HOUSER, STATE OF WASHINGTON, 36055, REGISTERED PROFESSIONAL ENGINEER, 1/04/2024

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PUBLIC WORKS DEPARTMENT
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KIRKLAND, WA 98033-6189 (206)828-1243
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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION - PHASE 1

TESC AND DEMO PLAN

C1.05

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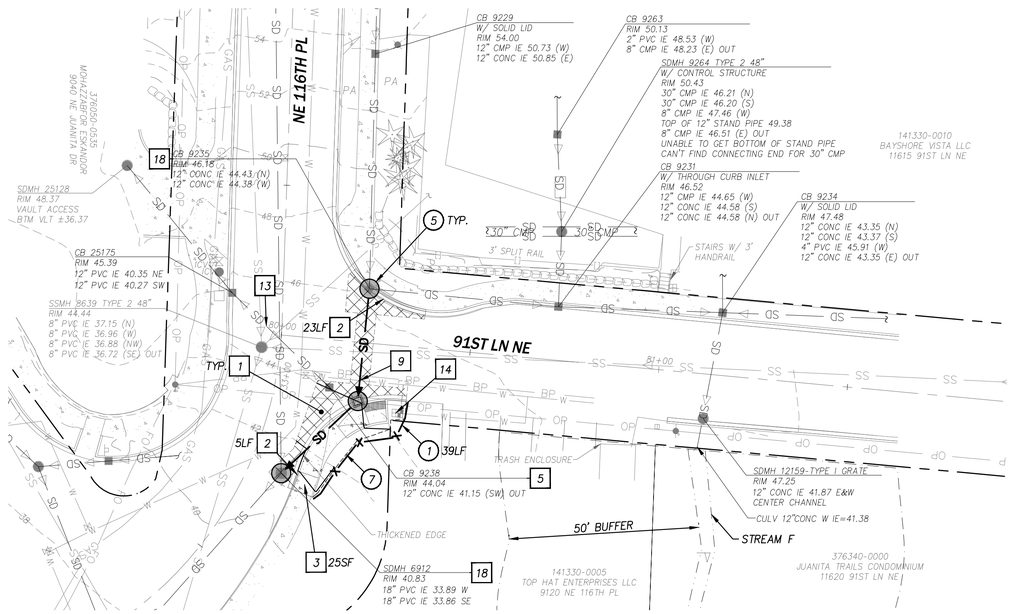
1/5/2024 4:02 PM PETER EVANS



CONSTRUCTION NOTES

1. SILT FENCE PER COK PLAN NO. CK-E.03
2. NETS, BLANKETS, TEMP. STABILIZATION PER COK PLAN NO. CK-E.06
3. CHECK DAM PER COK PLAN NO. CK-E.07
4. STRAW WATTLES PER COK PLAN NO. CK-E.10
5. STORM DRAIN PROTECTION INSERT PER COK PLAN NO. CK-E.11
6. HIGH VISIBILITY FENCE PER WSDOT STD. PLAN I-10.10-01
7. APPROX. LIMITS OF GRADING

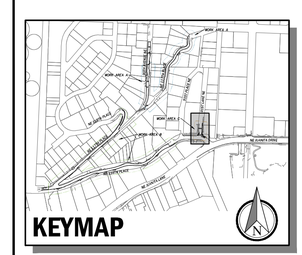
DEMOLITION NOTES

1. REMOVE EXIST. AC PAVEMENT
2. REMOVE EXIST. CONC. CURB AND GUTTER
3. REMOVE EXIST. CONC. SIDEWALK
4. REMOVE EXIST. SD PIPE
5. REMOVE EXIST. SD STRUCTURE
6. REMOVE EXIST. WALL/ROCKERY
7. REMOVE EXIST. TREE
8. REMOVE EXIST. GUY POLE, RELOCATE PER C3.07
9. PROTECT EXIST. 8" DI WATER MAIN
10. PROTECT EXIST. FIRE HYDRANT
11. REMOVE EXIST. 2" GAS MAIN, RELOCATE PER PSE
12. REMOVE EXIST. BURIED POWER/COMM, RELOCATE PER PURVEYOR
13. ABANDON EXIST. SD FACILITY
14. PROTECT EXIST. WATER SERVICE
15. PROTECT EXIST. UTILITY FEATURE
16. PROTECT EXIST. LANDSCAPING
17. PROTECT EXIST. SIGN
18. PROTECT EXIST. SD FACILITY

LEGEND

- APPROX. LIMIT OF GRADING
- SILT FENCE
- HIGH VISIBILITY CONSTRUCTION FENCE
- TEMP. CHAIN-LINK CONSTRUCTION FENCE
- FUTURE STORM DRAIN PIPE
- EXIST. STORM DRAIN PIPE
- TYPE 1 CATCH BASIN W/STANDARD GRATE
- STORM DRAINAGE PROTECTION INSERT
- REMOVE EXIST. SD PIPE
- REMOVE AND REPLACE HMA PAVEMENT SECTION

NOTE: SEE CITY OF KIRKLAND STANDARD PLAN NOTES ON C0.02 FOR ADDITIONAL TEMPORARY EROSION CONTROL SPECIFICATIONS AND REQUIREMENTS.



0 20 40
PLAN IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
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1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

TESC AND DEMO PLAN

C1.06

10 / 51

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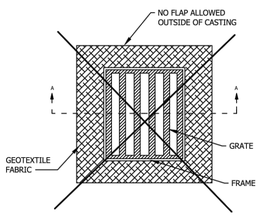
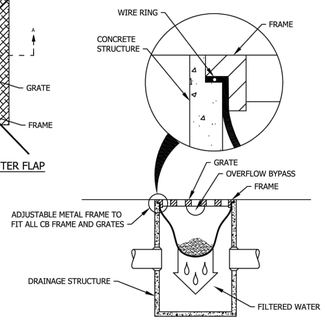
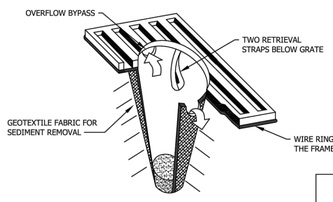
LAST REVISED: 01/2020



PROTECTION INSERSET WITH OUTER FLAP
(NOT ALLOWED)



STORM DRAIN PROTECTION
INSERT SECTION A-A



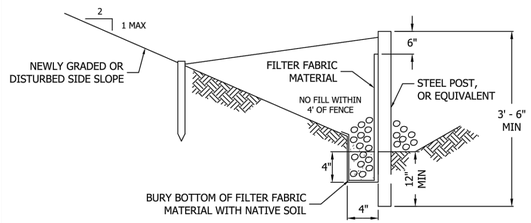
STORM DRAIN PROTECTION INSERT
ISOMETRIC VIEW (TYP.)

CITY OF KIRKLAND

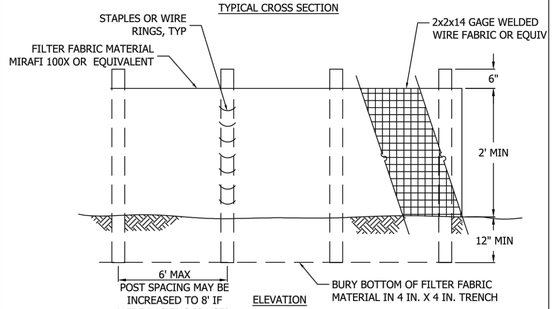
PLAN NO. CK- E.11

STORM DRAIN PROTECTION INSERT

LAST REVISED: 01/2022



TYPICAL CROSS SECTION



ELEVATION

NOTES

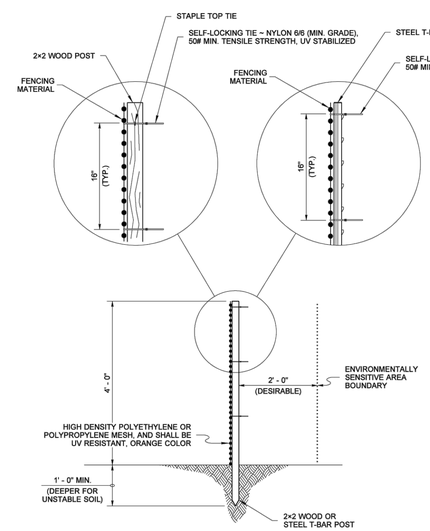
1. PREFAB FENCE ALLOWED IF REINFORCED AND APPROVED BY CITY INSPECTOR.
2. FENCE SHALL NOT BE INSTALLED ON SLOPES STEEPER THAN 2:1.
3. JOINTS IN FILTER FABRIC SHALL BE SPLICED AT POSTS. USE STAPLES, WIRE RINGS, OR EQUIVALENT TO ATTACH FABRIC TO POSTS AND FENCE.
4. REMOVE SEDIMENT WHEN IT REACHES 1/3 FENCE HEIGHT.
5. LOCATION OF FENCING SHALL BE AS SHOWN ON APPROVED PLANS OR AS DIRECTED BY THE CITY.
6. MAXIMUM 100' SHEET OR OVERLAND FLOW PATH LENGTH TO SILT FENCE.
7. DO NOT DIRECT FLOWS GREATER THAN 0.5 CFS TO FENCE.
8. SILT FENCE SHOULD NOT BE INSTALLED IN STREAMS OR V-SHAPED DITCHES.
9. FILTER FABRIC SHOULD BE INSTALLED ALONG CONTOURS WHENEVER POSSIBLE.

CITY OF KIRKLAND

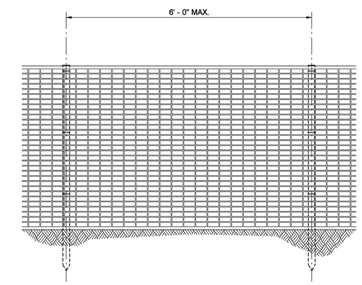
PLAN NO. CK - E.03

SILT FENCE

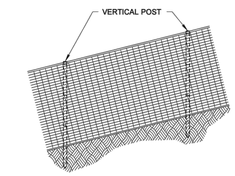
DRAWN BY: BILL BERENS



TYPICAL SECTION



ELEVATION

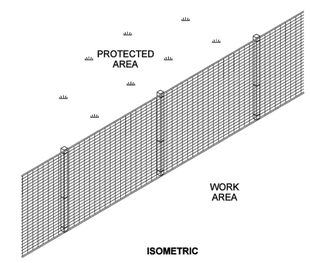


ELEVATION

FENCE ON SLOPE

NOTE

1. Post shall have sufficient strength and durability to support the fence through the life of the project.



ISOMETRIC

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT

MARK W. MAURER

CERTIFICATE NO. 000598

NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT BUT IS AN ELECTRONICALLY INCLUDED, TO ORIGINAL, SIGNED BY THE ENGINEER AND APPROVED FOR PUBLICATION FILE PLAN ON FILE IN THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A COPY MAY BE OBTAINED UPON REQUEST.

HIGH VISIBILITY FENCE

STANDARD PLAN I-10.10-01

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Pasco Bakotich III 08-11-09

STATE DESIGN ENGINEER DATE

Washington State Department of Transportation

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
0	BID SET	PCE	MJH	12/27/23

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1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

TESC DETAILS

C1.100

11 / 51

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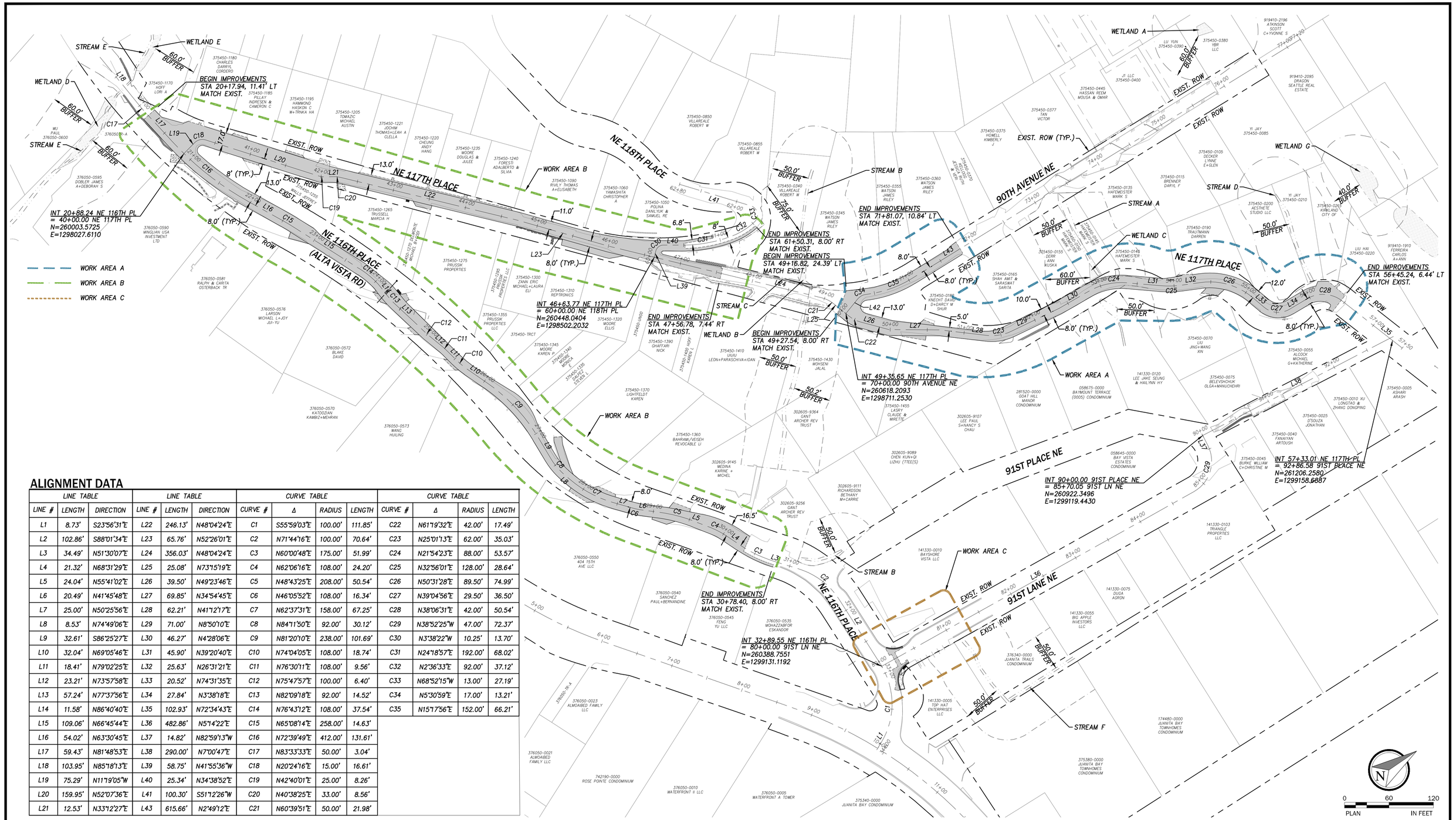

ALIGNMENT DATA

LINE TABLE			LINE TABLE			CURVE TABLE				CURVE TABLE			
LINE #	LENGTH	DIRECTION	LINE #	LENGTH	DIRECTION	CURVE #	Δ	RADIUS	LENGTH	CURVE #	Δ	RADIUS	LENGTH
L1	8.73'	S23°56'31"E	L22	246.13'	N48°04'24"E	C1	S55°59'03"E	100.00'	111.85'	C22	N61°19'32"E	42.00'	17.49'
L2	102.86'	S88°01'34"E	L23	65.76'	N52°26'01"E	C2	N71°44'16"E	100.00'	70.64'	C23	N25°01'13"E	62.00'	35.03'
L3	34.49'	N51°30'07"E	L24	356.03'	N48°04'24"E	C3	N60°00'48"E	175.00'	51.99'	C24	N21°54'23"E	88.00'	53.57'
L4	21.32'	N68°31'29"E	L25	25.08'	N73°15'19"E	C4	N62°06'16"E	108.00'	24.20'	C25	N32°56'01"E	128.00'	28.64'
L5	24.04'	N55°41'02"E	L26	39.50'	N49°23'46"E	C5	N48°43'25"E	208.00'	50.54'	C26	N50°31'28"E	89.50'	74.99'
L6	20.49'	N41°45'48"E	L27	69.85'	N34°54'45"E	C6	N46°05'52"E	108.00'	16.34'	C27	N39°04'56"E	29.50'	36.50'
L7	25.00'	N50°25'56"E	L28	62.21'	N41°12'17"E	C7	N62°37'31"E	158.00'	67.25'	C28	N38°06'31"E	42.00'	50.54'
L8	8.53'	N74°49'06"E	L29	71.00'	N8°50'10"E	C8	N84°11'50"E	92.00'	30.12'	C29	N38°52'25"W	47.00'	72.37'
L9	32.61'	S86°25'27"E	L30	46.27'	N4°28'06"E	C9	N81°20'10"E	238.00'	101.69'	C30	N3°38'22"W	10.25'	13.70'
L10	32.04'	N69°05'46"E	L31	45.90'	N39°20'40"E	C10	N74°04'05"E	108.00'	18.74'	C31	N24°18'57"E	192.00'	68.02'
L11	18.41'	N79°02'25"E	L32	25.63'	N26°31'21"E	C11	N76°30'11"E	108.00'	9.56'	C32	N2°36'33"E	92.00'	37.12'
L12	23.21'	N73°57'58"E	L33	20.52'	N74°31'35"E	C12	N75°47'57"E	100.00'	6.40'	C33	N68°52'15"W	13.00'	27.19'
L13	57.24'	N77°37'56"E	L34	27.84'	N3°38'18"E	C13	N82°09'18"E	92.00'	14.52'	C34	N5°30'59"E	17.00'	13.21'
L14	11.58'	N86°40'40"E	L35	102.93'	N72°34'43"E	C14	N76°43'12"E	108.00'	37.54'	C35	N15°17'56"E	152.00'	66.21'
L15	109.06'	N66°45'44"E	L36	482.86'	N5°14'22"E	C15	N65°08'14"E	258.00'	14.63'				
L16	54.02'	N63°30'45"E	L37	14.82'	N82°59'13"W	C16	N72°39'49"E	412.00'	131.61'				
L17	59.43'	N81°48'53"E	L38	290.00'	N7°00'47"E	C17	N83°33'33"E	50.00'	3.04'				
L18	103.95'	N85°18'13"E	L39	58.75'	N41°55'36"W	C18	N20°24'16"E	15.00'	16.61'				
L19	75.29'	N11°19'05"W	L40	25.34'	N34°38'52"E	C19	N42°40'01"E	25.00'	8.26'				
L20	159.95'	N52°07'36"E	L41	100.30'	S51°12'26"W	C20	N40°38'25"E	33.00'	8.56'				
L21	12.53'	N33°12'27"E	L43	615.66'	N2°49'12"E	C21	N60°39'51"E	50.00'	21.98'				

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

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CITY OF KIRKLAND WASHINGTON

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

HORIZONTAL CONTROL PLAN

C2.00

12 / 51

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STORM FACILITY NOTES:

1. ALL DRAIN PIPES (SD) SHALL BE PVC (3034) UNLESS NOTED OTHERWISE ON PLANS OR PROJECT DETAILS.
2. ALL CATCH BASIN LOCATIONS REFERENCED TO CENTER OF STRUCTURE. GRATE PLACEMENT SHALL BE PER STRUCTURE PLACEMENT DETAIL ON SHEET C3.101.
3. ALL TYPE 1 AND TYPE 1-L CATCH BASIN STRUCTURES SHALL BE PRE-CAST CONCRETE FABRICATED PER COK PLANS CK-D.07 AND CK-D.08 RESPECTIVELY. TYPICAL STRUCTURES SHALL BE INSTALLED PER COK STANDARDS W/RECTANGULAR FRAME AND VANED GRATE PER COK PLAN AND CK-D.15 UNLESS NOTED OTHERWISE.
4. SEE ADDITIOANL COK STANDARD NOTES, INCLUDING STORM DRAINAGE NOTES, ON SHEET C0.02.
5. ETHAFOAM/RIGID INSULATION SHALL BE INSTALLED BETWEEN PIPES WHERE CLEARANCE IS 12-INCHES OR LESS.

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

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1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

OVERALL GRADING AND DRAINAGE PLAN

C3.00

13 / 51

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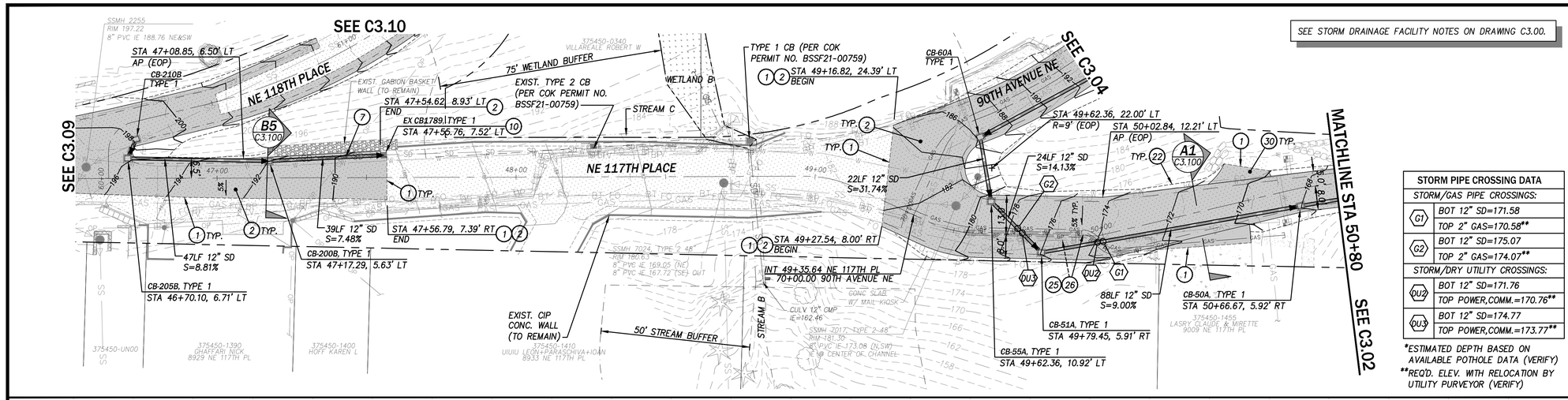
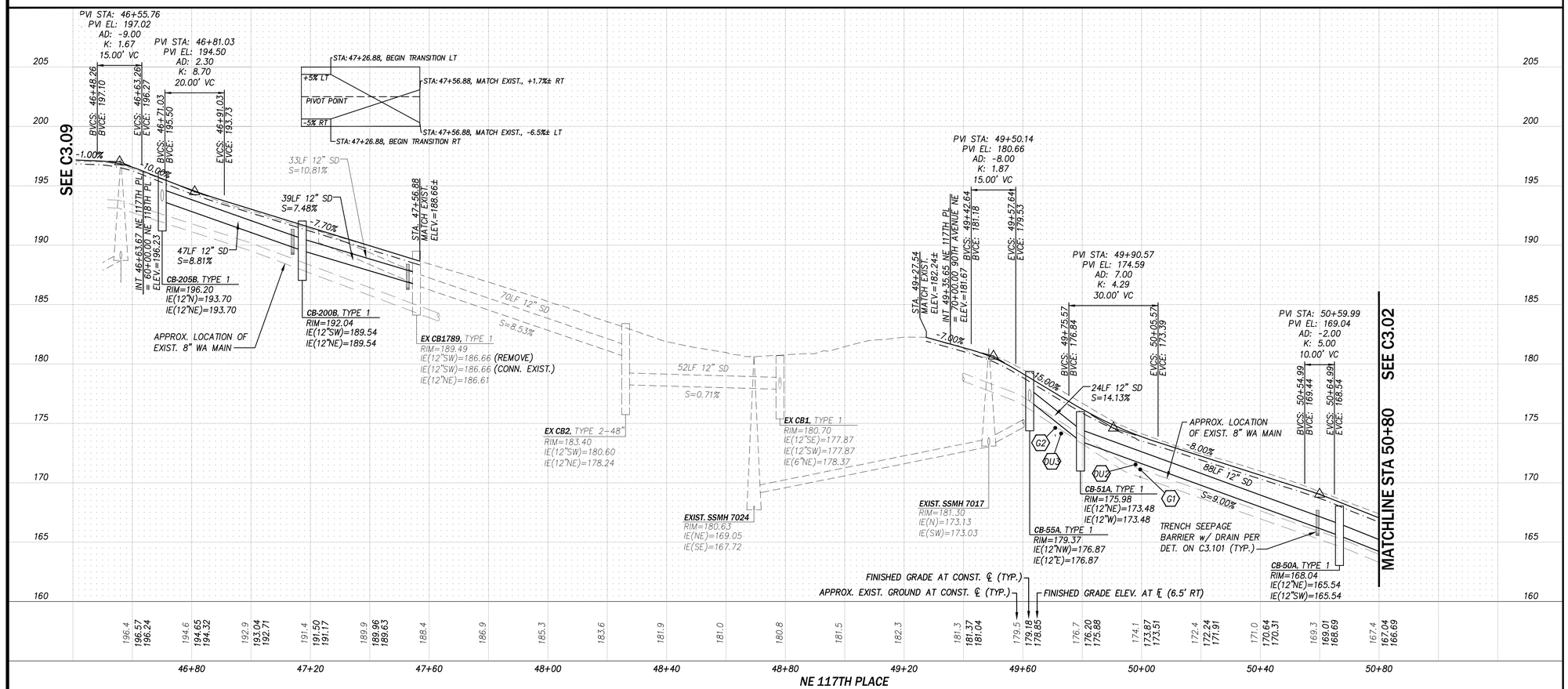


STORM PIPE CROSSING DATA	
STORM/GAS PIPE CROSSINGS:	
G1	BOT 12" SD=171.58
	TOP 2" GAS=170.58**
G2	BOT 12" SD=175.07
	TOP 2" GAS=174.07**
STORM/DRY UTILITY CROSSINGS:	
DU2	BOT 12" SD=171.76
	TOP POWER,COMM.=170.76**
DU3	BOT 12" SD=174.77
	TOP POWER,COMM.=173.77**

*ESTIMATED DEPTH BASED ON AVAILABLE POTHOLE DATA (VERIFY)
**REQ'D. ELEV. WITH RELOCATION BY UTILITY PURVEYOR (VERIFY)

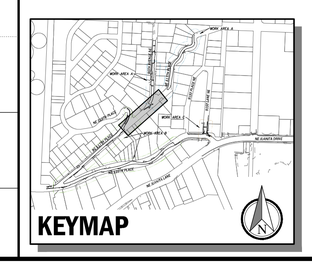


CONSTRUCTION NOTES

1. SAWCUT, MATCH EXIST. PAVEMENT
2. REMOVE, REPLACE EXIST. HMA PAVEMENT SEC. PER TYPICAL DET. ON C3.100
6. MATCH EXIST. PAVEMENT EDGE
7. REMOVE EXIST. SD PIPE AND/OR STRUCTURE, REF. TESC AND DEMOLITION PLAN SHTS. C1.01–C1.08
8. ABANDON EXIST. SD PIPE IN–PLACE, PLUG PIPE END FULL W/CEMENT CONC.
9. 24" MANHOLE FRAME W/LOCKING COVER AND LOGO PER COK PLAN CK–D.18, W/CIRCULAR RISER AND TRANSITION PER COK PLAN CK–D.07A
10. CONN. SD PIPE TO EXIST. CATCH BASIN STRUCTURE
11. CONN. EXIST. SD PIPE TO NEW CATCH BASIN STRUCTURE
12. TYPE 1 CATCH BASIN W/CONC. CHANNEL TO PIPE SPRINGLINE
13. TRENCH SEEPAGE BARRIER W/DRAIN PER DET. ON C3.101
14. RECTANGULAR BI–DIRECTIONAL VANED GRATE PER WSDOT STD. PLAN 30.40–03
15. ADJUST EXIST. SD FRAME, GRATE TO FINISH GRADE PER COK PLAN NO. CK–R.02
16. REMOVE EXIST. WALL/ROCKERY, APPROX. LENGTH PER PLAN
17. PROTECT EXIST. RETAINING WALL
18. ROCKERY WALL PER COK PLAN CK–R.52
19. MODULAR BLOCK RETAINING WALL PER TYP. SEC. ON C3.102 AND DET. ON DWG. C6.00–C6.02
20. GRAVITY BLOCK WALL, REF. DET. ON SHTS. C6.00 THRU C6.02
21. PERMANENT BUFFER IMPACT, APPROX. AREA PER PLAN
22. APPROX. LIMITS OF GRADING
23. PROTECT EXIST. MONUMENT, INSTALL NEW MON. CASE AND COVER PER COK PLAN CK–R.03
24. PROTECT EXIST. LANDSCAPING; RESTORE DISTURBED AREAS IN–KIND
25. REMOVE, RELOCATE EXIST. GAS MAIN (BY OTHERS, PSE)
26. RELOCATE EXIST. BURIED FRANCHISE UTILITY TO AVOID CONFLICT W/STORM OR WATER FACILITY (BY OTHERS)
28. RELOCATE EXIST. UTILITY POLE, GUY ANCHOR (BY OTHERS)
29. REMOVE, SALVAGE EXIST. CONC. PAVERS; RE–INSTALL SALVAGED CONC. PAVERS AT DRIVEWAY TO REPAIR DISTURBED AREAS
30. TYPICAL DRIVEWAY PAVEMENT SEC. PER DET. ON C3.100, REF. DETS. ON SHTS. C3.31–C3.41

LEGEND

- HMA PAVEMENT, REMOVE/REPLACE EXIST.
- CONCRETE PAVEMENT
- SAWCUT
- FLOWLINE OR GRADE BREAK AT THICKENED EDGE
- 100 — PROPOSED 2-FT CONTOUR
- 100 — EXISTING 2-FT CONTOUR
- GRAVITY BLOCK WALL
- MODULAR BLOCK (MSE) RETAINING WALL
- ROCKERY
- TOP XXX / TOE XXX (#) — FINISHED GRADE AT TOP/TOE OF WALL
- STORM DRAIN PIPE
- WALL DRAIN
- SD — SD — EXIST. STORM DRAIN PIPE
- SD CATCH BASIN



0 5 10 VERT. IN FEET
0 20 40 HORIZ. IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19–23–PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
0	BID SET	PCE	MJH	12/27/23

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MATTHEW J. HOBBS, STATE OF WASHINGTON, 38374, REGISTERED PROFESSIONAL ENGINEER, 1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

ROADWAY IMPROVEMENTS PLAN AND PROFILE

C3.01

14 / 51

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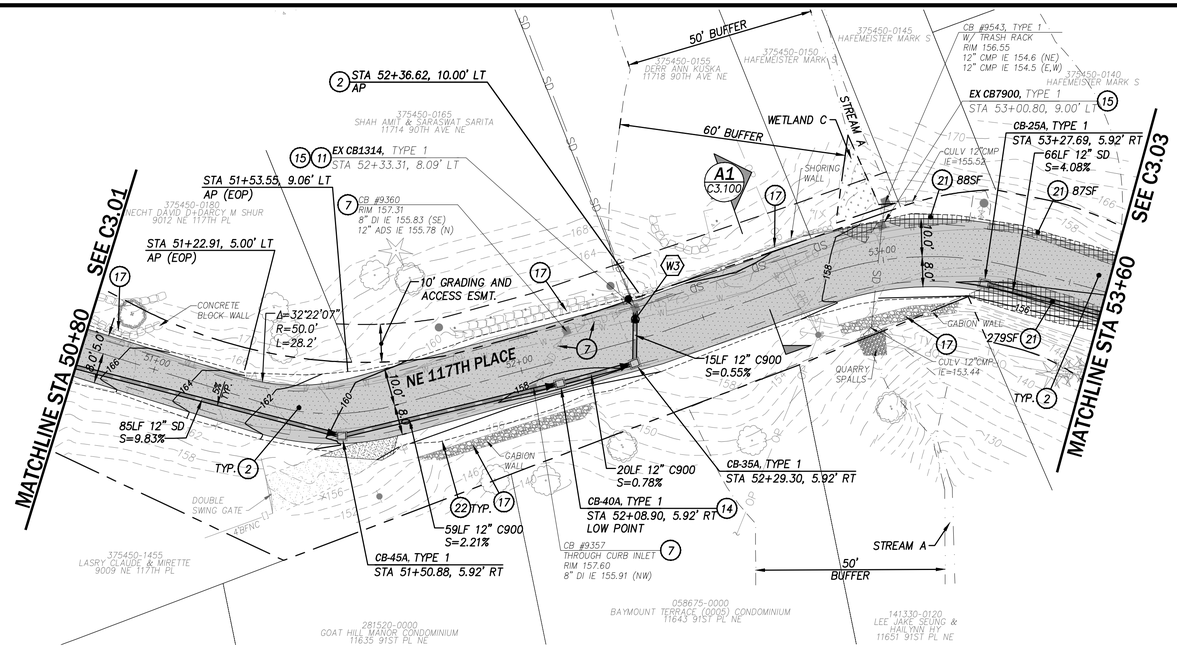
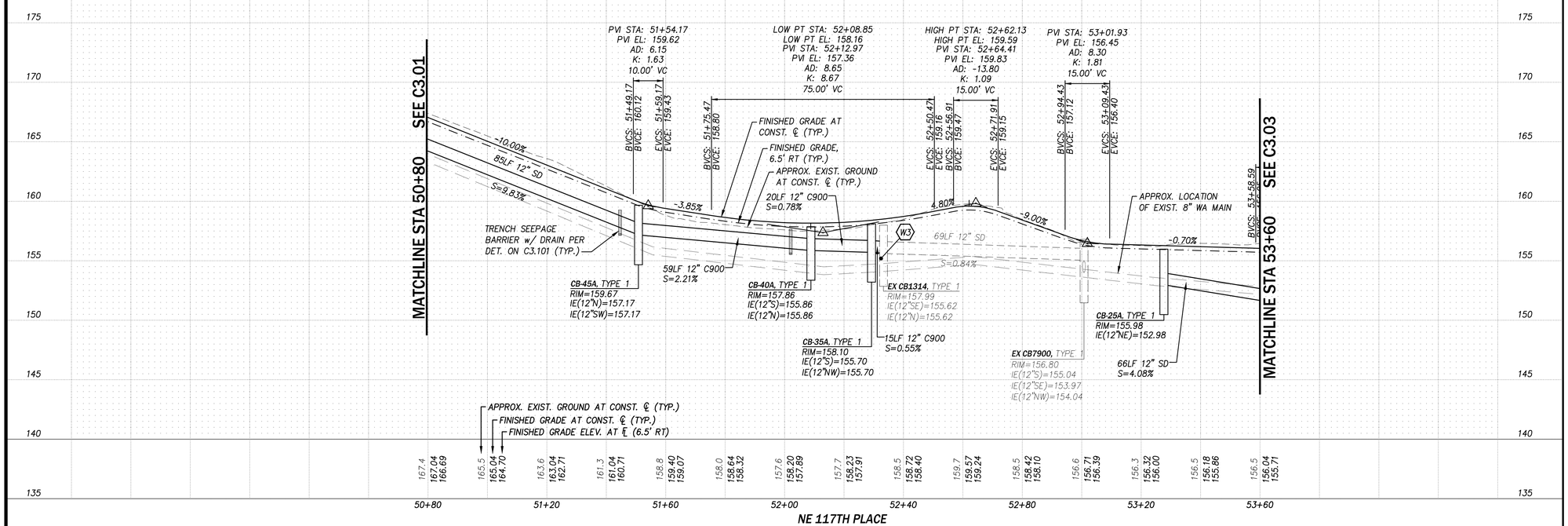
SEE STORM DRAINAGE FACILITY NOTES ON DRAWING C3.00.



STORM PIPE CROSSING DATA	
STORM/WATER PIPE CROSSINGS:	
W3	BOT 12" SD=155.64
	TOP 8" WA=154.75*

*ESTIMATED DEPTH BASED ON AVAILABLE POTHOLE DATA (VERIFY)



CONSTRUCTION NOTES

1. SAWCUT, MATCH EXIST. PAVEMENT
2. REMOVE, REPLACE EXIST. HMA PAVEMENT SEC. PER TYPICAL DET. ON C3.100
6. MATCH EXIST. PAVEMENT EDGE
7. REMOVE EXIST. SD PIPE AND/OR STRUCTURE, REF. TESC AND DEMOLITION PLAN SHTS. C1.01–C1.08
8. ABANDON EXIST. SD PIPE IN–PLACE, PLUG PIPE END FULL W/CEMENT CONC.
9. 24" MANHOLE FRAME W/LOCKING COVER AND LOGO PER COK PLAN CK–D.18, W/CIRCULAR RISER AND TRANSITION PER COK PLAN CK–D.07A
10. CONN. SD PIPE TO EXIST. CATCH BASIN STRUCTURE
11. CONN. EXIST. SD PIPE TO NEW CATCH BASIN STRUCTURE
12. TYPE 1 CATCH BASIN W/CONC. CHANNEL TO PIPE SPRINGLINE
13. TRENCH SEEPAGE BARRIER W/DRAIN PER DET. ON C3.101
14. RECTANGULAR BI–DIRECTIONAL VANED GRATE PER WSDOT STD. PLAN 30.40–03
15. ADJUST EXIST. SD FRAME, GRATE TO FINISH GRADE PER COK PLAN NO. CK–R.02
16. REMOVE EXIST. WALL/ROCKERY, APPROX. LENGTH PER PLAN
17. PROTECT EXIST. RETAINING WALL
18. ROCKERY WALL PER COK PLAN CK–R.52
19. MODULAR BLOCK RETAINING WALL PER TYP. SEC. ON C3.102 AND DET. ON DWG. C6.00–C6.02
20. GRAVITY BLOCK WALL, REF. DET. ON SHTS. C6.00 THRU C6.02
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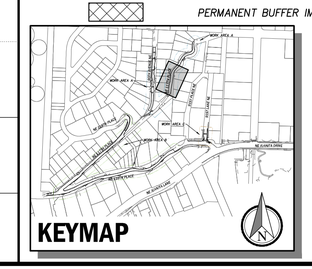
- ROCKERY
- TOP XXX (#) / TOE XXX (#) — FINISHED GRADE AT TOP/TOE OF WALL
- STORM DRAIN PIPE
- WALL DRAIN
- SD — SD — EXIST. STORM DRAIN PIPE
- SD CATCH BASIN
- PERMANENT BUFFER IMPACT AREA



0 5 10 VERT. IN FEET
0 20 40 HORIZ. IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19–23–PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
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MATTHEW J. HEUCH, STATE OF WASHINGTON, 46455, REGISTERED PROFESSIONAL ENGINEER, 1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

ROADWAY IMPROVEMENTS PLAN AND PROFILE

C3.02

15 / 51

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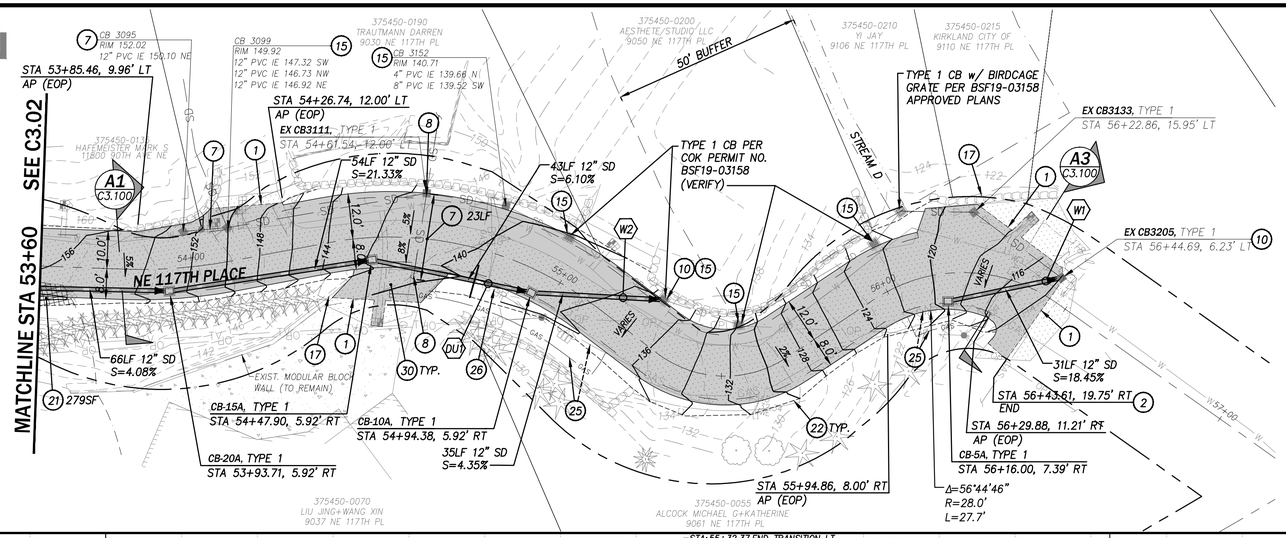
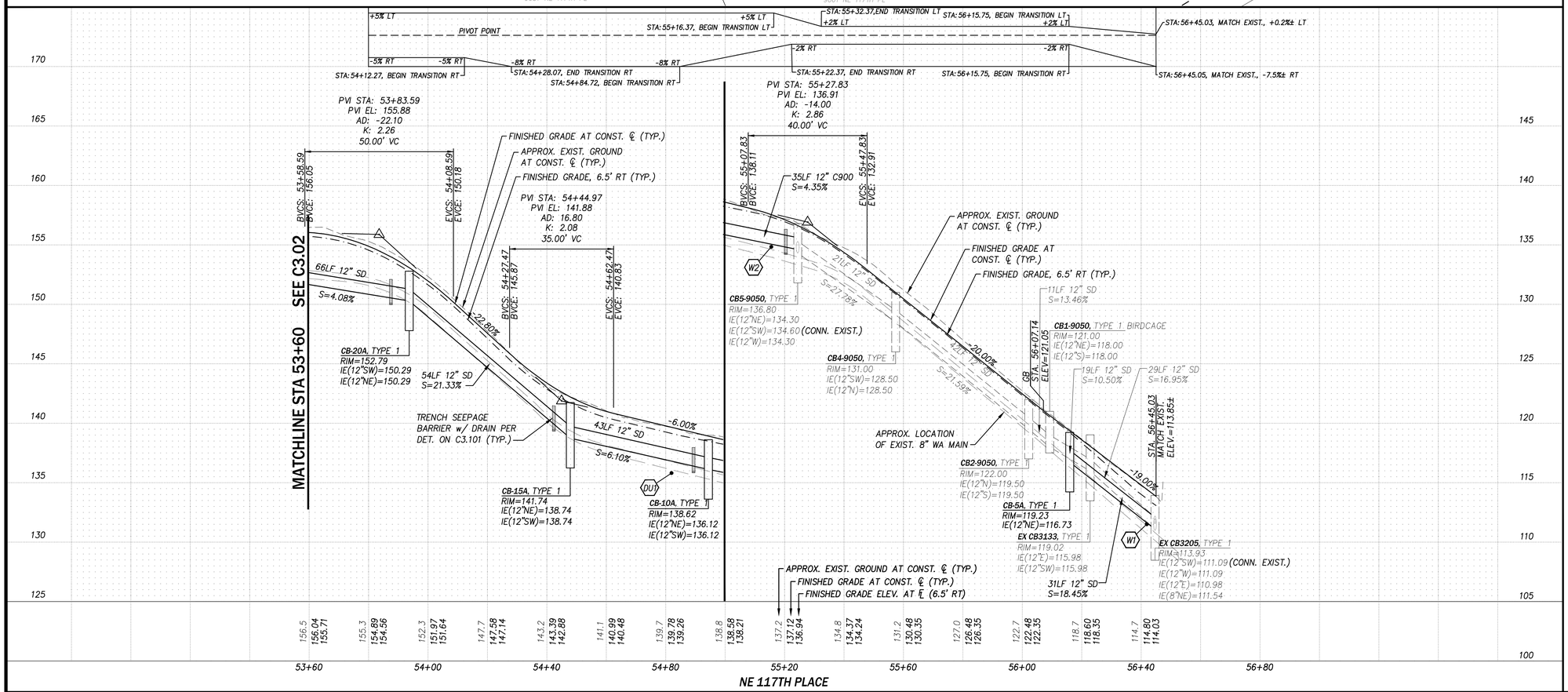
SEE STORM DRAINAGE FACILITY NOTES ON DRAWING C3.00.



STORM PIPE CROSSING DATA	
STORM/WATER PIPE CROSSINGS:	
W1	BOT 12" SD=111.86
	TOP 8" WA=111.39*
W2	BOT 12" SD=135.06
	TOP 8" WA=134.62*
STORM/DRY UTILITY CROSSINGS:	
DU1	BOT 12" SD=136.83
	TOP POWER,COMM.=135.49*

*ESTIMATED DEPTH BASED ON AVAILABLE POTHOLE DATA (VERIFY)



CONSTRUCTION NOTES

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17. PROTECT EXIST. RETAINING WALL
18. ROCKERY WALL PER COK PLAN CK–R.52
19. MODULAR BLOCK RETAINING WALL PER TYP. SEC. ON C3.102 AND DET. ON DWG. C6.00–C6.02
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LEGEND

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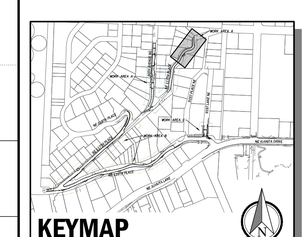
- ROCKERY
- TOP XXX TOE XXX — FINISHED GRADE AT TOP/TOE OF WALL
- STORM DRAIN PIPE
- WALL DRAIN
- SD — EXIST. STORM DRAIN PIPE
- SD CATCH BASIN



0 5 10 VERT. IN FEET
0 20 40 HORIZ. IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19–23–PW	MJH	MJH	AS NOTED	1/04/2024

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MATTHEW J. HOUCK, STATE OF WASHINGTON, 40360, REGISTERED PROFESSIONAL ENGINEER, 1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

ROADWAY IMPROVEMENTS PLAN AND PROFILE

C3.03

16 / 51

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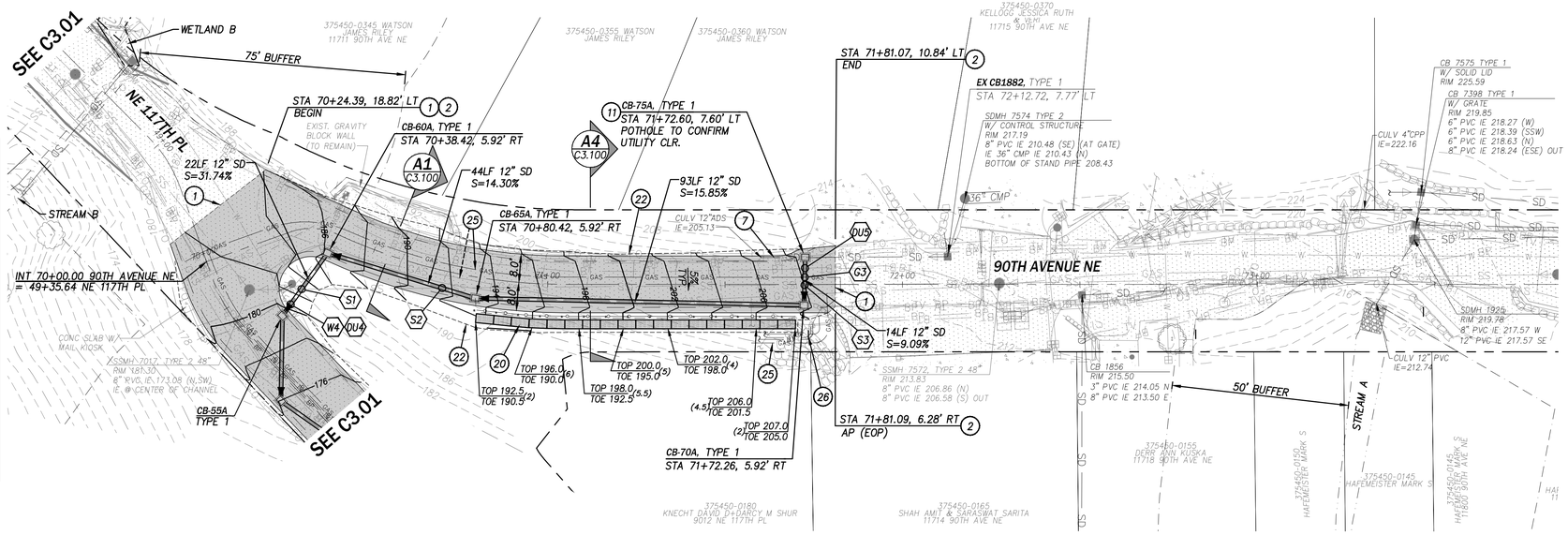
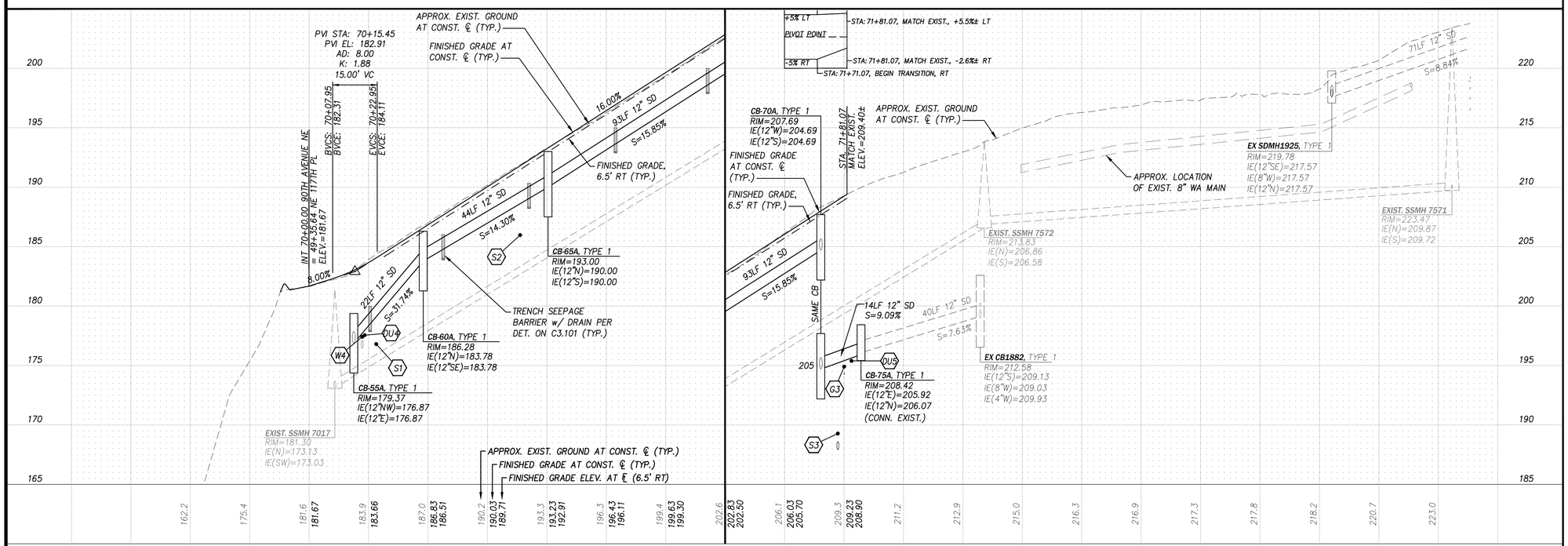
SEE STORM DRAINAGE FACILITY NOTES ON DRAWING C3.00.



STORM PIPE CROSSING DATA	
STORM/SEWER PIPE CROSSINGS:	
S1	BOT 12" SD=179.38
	TOP 8" SS=176.11
S2	BOT 12" SD=188.60
	TOP 8" SS=182.39
S3	BOT 12" SD=205.21
	TOP 8" SS=198.59
STORM/WATER PIPE CROSSINGS:	
W4	BOT 12" SD=177.96
	TOP 8" WA=177.12*
STORM/GAS PIPE CROSSINGS:	
G3	BOT 12" SD=205.40
	TOP 2" GAS=204.40**
STORM/DRY UTILITY CROSSINGS:	
DU4	BOT 12" SD=178.27
	TOP FO=177.27**
DU5	BOT 12" SD=205.63
	TOP COMM.=205.09*

*ESTIMATED DEPTH BASED ON AVAILABLE POTHOLE DATA (VERIFY)
**REQ'D ELEV. WITH RELOCATION BY UTILITY PURVEYOR (VERIFY)



CONSTRUCTION NOTES

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15. ADJUST EXIST. SD FRAME, GRATE TO FINISH GRADE PER COK PLAN NO. CK–R.02
16. REMOVE EXIST. WALL/ROCKERY, APPROX. LENGTH PER PLAN
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19. MODULAR BLOCK RETAINING WALL PER TYP. SEC. ON C3.102 AND DET. ON DWG. C6.00–C6.02
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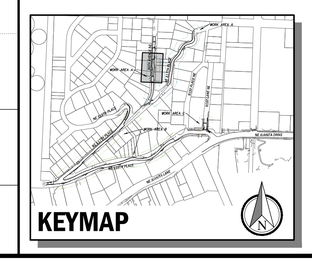

0 5 10 VERT. IN FEET
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MATTHEW J. HOUCK, STATE OF WASHINGTON, 40366, REGISTERED PROFESSIONAL ENGINEER, 1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

ROADWAY IMPROVEMENTS PLAN AND PROFILE

C3.04

17 / 51

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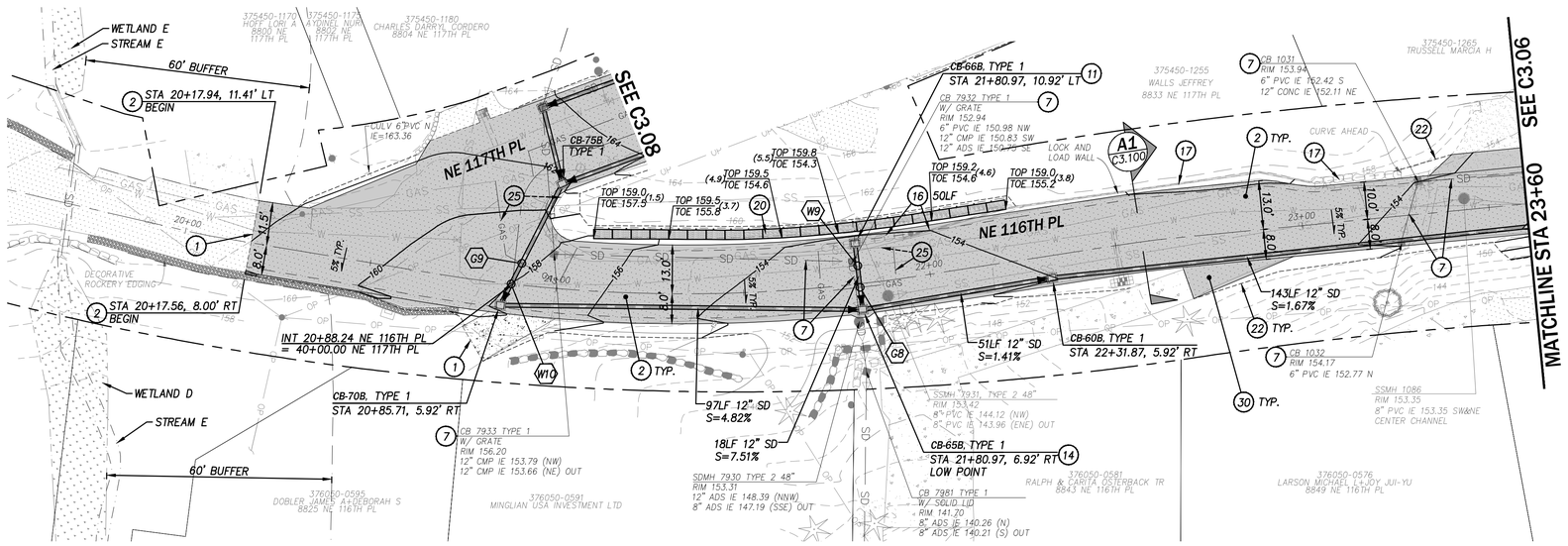
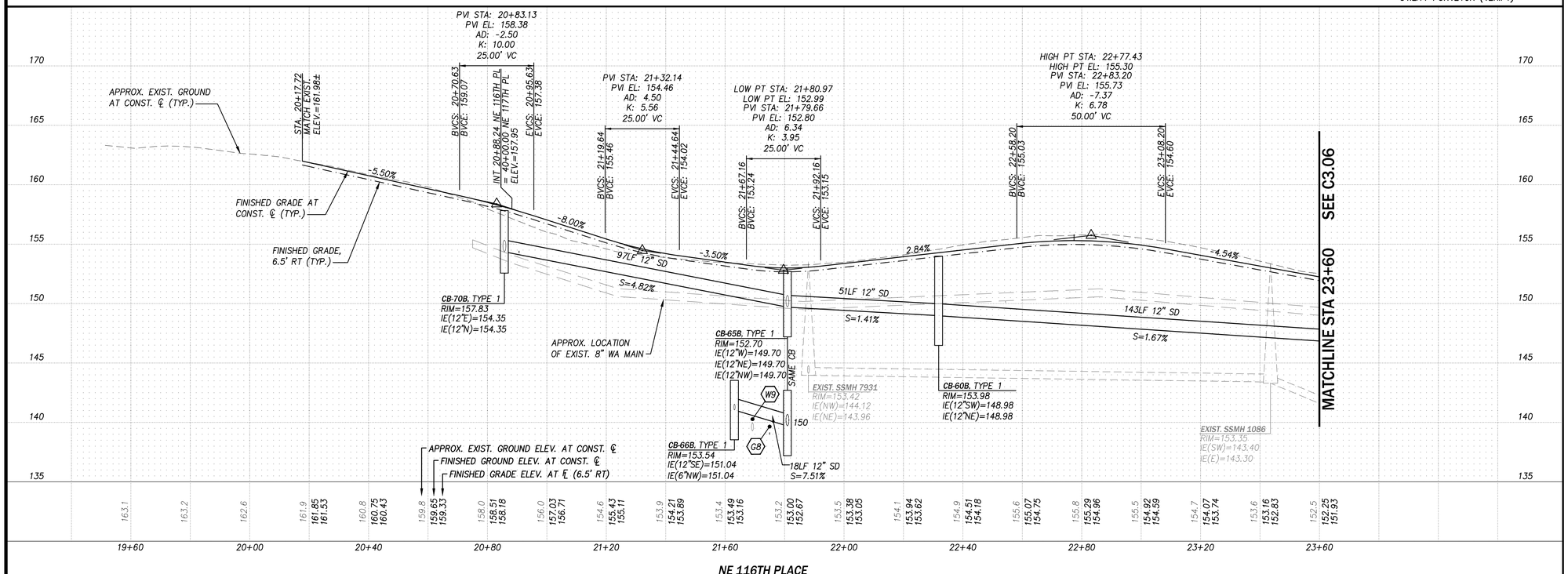
SEE STORM DRAINAGE FACILITY NOTES ON DRAWING C3.00.



STORM PIPE CROSSING DATA	
STORM/WATER PIPE CROSSINGS:	
W9	BOT 12" SD=150.58
	TOP 8" WA=149.96*
W10	BOT 12" SD=154.84
	TOP 8" WA=154.10*
STORM/GAS PIPE CROSSINGS:	
G8	BOT 12" SD=150.15
	TOP 2" GAS=149.15**
G9	BOT 12" SD=155.31
	TOP 2" GAS=154.31**

*ESTIMATED DEPTH BASED ON AVAILABLE POTHOLE DATA (VERIFY)
**REQ'D. ELEV. WITH RELOCATION BY UTILITY PURVEYOR (VERIFY)



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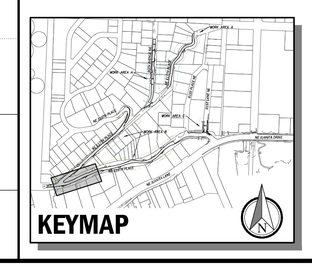
25. REMOVE, RELOCATE EXIST. GAS MAIN (BY OTHERS, PSE)
26. RELOCATE EXIST. BURIED FRANCHISE UTILITY TO AVOID CONFLICT W/STORM OR WATER FACILITY (BY OTHERS)
28. RELOCATE EXIST. UTILITY POLE, GUY ANCHOR (BY OTHERS)
29. REMOVE, SALVAGE EXIST. CONC. PAVERS; RE–INSTALL SALVAGED CONC. PAVERS AT DRIVEWAY TO REPAIR DISTURBED AREAS
30. TYPICAL DRIVEWAY PAVEMENT SEC. PER DET. ON C3.100, REF. DETS. ON SHTS. C3.31–C3.41

LEGEND

- HMA PAVEMENT, REMOVE/REPLACE EXIST.
- CONCRETE PAVEMENT
- SAWCUT
- FLOWLINE OR GRADE BREAK AT THICKENED EDGE
- 100 — PROPOSED 2-FT CONTOUR
- 100 — EXISTING 2-FT CONTOUR
- GRAVITY BLOCK WALL
- MODULAR BLOCK (MSE) RETAINING WALL
- ROCKERY
- TOP XXX TOE XXX (#) — FINISHED GRADE AT TOP/TOE OF WALL
- STORM DRAIN PIPE
- WALL DRAIN
- SD — SD — EXIST. STORM DRAIN PIPE
- SD CATCH BASIN



0 5 10 VERT. IN FEET
0 20 40 HORIZ. IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19–23–PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
0	BID SET	PCE	MJH	12/27/23

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MATTHEW J. JACKSON, STATE OF WASHINGTON, 36655, REGISTERED PROFESSIONAL ENGINEER, 1/04/2024

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KIRKLAND, WA 98033–6189 (206)828–1243
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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

ROADWAY IMPROVEMENTS PLAN AND PROFILE

C3.05

18 / 51

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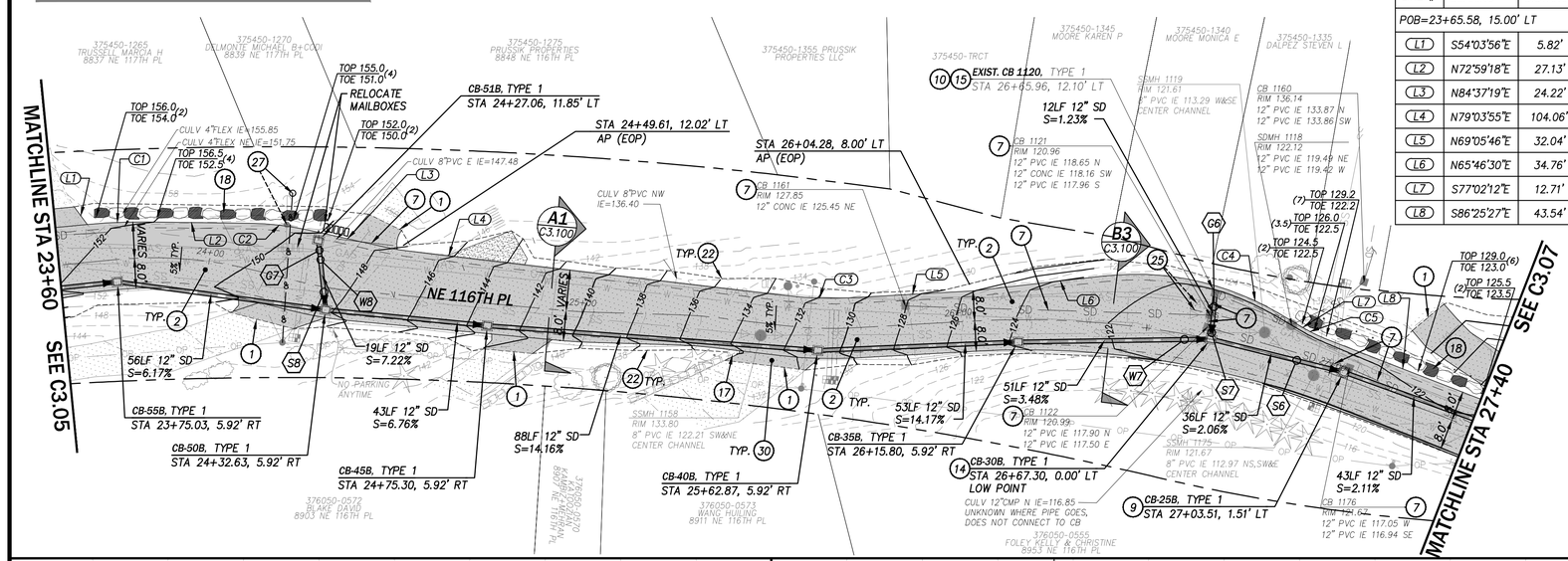
SEE STORM DRAINAGE FACILITY NOTES ON DRAWING C3.00.



LEFT PAVEMENT EDGE								
LINE #	BEARING	DISTANCE	OFFSET (LT)	CURVE #	DELTA	RADIUS	LENGTH	OFFSET (LT)
POB=23+65.58, 15.00' LT				C1	N69°55'37"E	150.00'	16.03'	VARIES
L1	S54°03'56"E	5.82'	10.00'	C2	N78°54'20"E	75.00'	15.49'	VARIES
L2	N72°59'18"E	27.13'	11.87'	C3	N74°04'05"E	99.50'	17.36'	8.00'
L3	N84°37'19"E	24.22'	12.03'	C4	N84°22'09"E	75.00'	48.68'	VARIES
L4	N79°03'55"E	104.06'	8.00'	C5	S81°43'49"E	30.00'	4.92'	VARIES
L5	N69°05'46"E	32.04'	8.00'					
L6	N65°46'30"E	34.76'	12.43'					
L7	S77°02'12"E	12.71'	7.94'					
L8	S86°25'27"E	43.54'	8.00'					

STORM PIPE CROSSING DATA	
STORM/SEWER PIPE CROSSINGS:	
S6	BOT 12" SD=118.02
	TOP 8" SS=113.78
S7	BOT 12" SD=118.52
	TOP 8" SS=114.94
S8	BOT 12" SD=143.50
	TOP 8" SS=134.95
STORM/WATER PIPE CROSSINGS:	
W7	BOT 12" SD=118.75
	TOP 8" WA=117.61*
W8	BOT 8" WA=145.56*
	TOP 12" SD=145.12
STORM/GAS PIPE CROSSINGS:	
G6	BOT 12" SD=118.58
	TOP 2" GAS=117.58**
G7	BOT 2" GAS=147.10*
	TOP 12" SD=145.30

*ESTIMATED DEPTH BASED ON AVAILABLE POTHOLE DATA (VERIFY)
**REQ'D ELEV. WITH RELOCATION BY UTILITY PURVEYOR (VERIFY)

CONSTRUCTION NOTES

1. SAWCUT, MATCH EXIST. PAVEMENT
2. REMOVE, REPLACE EXIST. HMA PAVEMENT SEC. PER TYPICAL DET. ON C3.100
6. MATCH EXIST. PAVEMENT EDGE
7. REMOVE EXIST. SD PIPE AND/OR STRUCTURE, REF. TESC AND DEMOLITION PLAN SHTS. C1.01–C1.08
8. ABANDON EXIST. SD PIPE IN–PLACE, PLUG PIPE END FULL W/CEMENT CONC.
9. 24" MANHOLE FRAME W/LOCKING COVER AND LOGO PER COK PLAN CK–D.18, W/CIRCULAR RISER AND TRANSITION PER COK PLAN CK–D.07A
10. CONN. SD PIPE TO EXIST. CATCH BASIN STRUCTURE
11. CONN. EXIST. SD PIPE TO NEW CATCH BASIN STRUCTURE
12. TYPE 1 CATCH BASIN W/CONC. CHANNEL TO PIPE SPRINGLINE
13. TRENCH SEEPAGE BARRIER W/DRAIN PER DET. ON C3.101
14. RECTANGULAR BI–DIRECTIONAL VANED GRATE PER WSDOT STD. PLAN 30.40–03
15. ADJUST EXIST. SD FRAME, GRATE TO FINISH GRADE PER COK PLAN NO. CK–R.02
16. REMOVE EXIST. WALL/ROCKERY, APPROX. LENGTH PER PLAN
17. PROTECT EXIST. RETAINING WALL
18. ROCKERY WALL PER COK PLAN CK–R.52
19. MODULAR BLOCK RETAINING WALL PER TYP. SEC. ON C3.102 AND DET. ON DWG. C6.00–C6.02
20. GRAVITY BLOCK WALL, REF. DET. ON SHTS. C6.00 THRU C6.02
21. PERMANENT BUFFER IMPACT, APPROX. AREA PER PLAN
22. APPROX. LIMITS OF GRADING
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LEGEND

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- CONCRETE PAVEMENT
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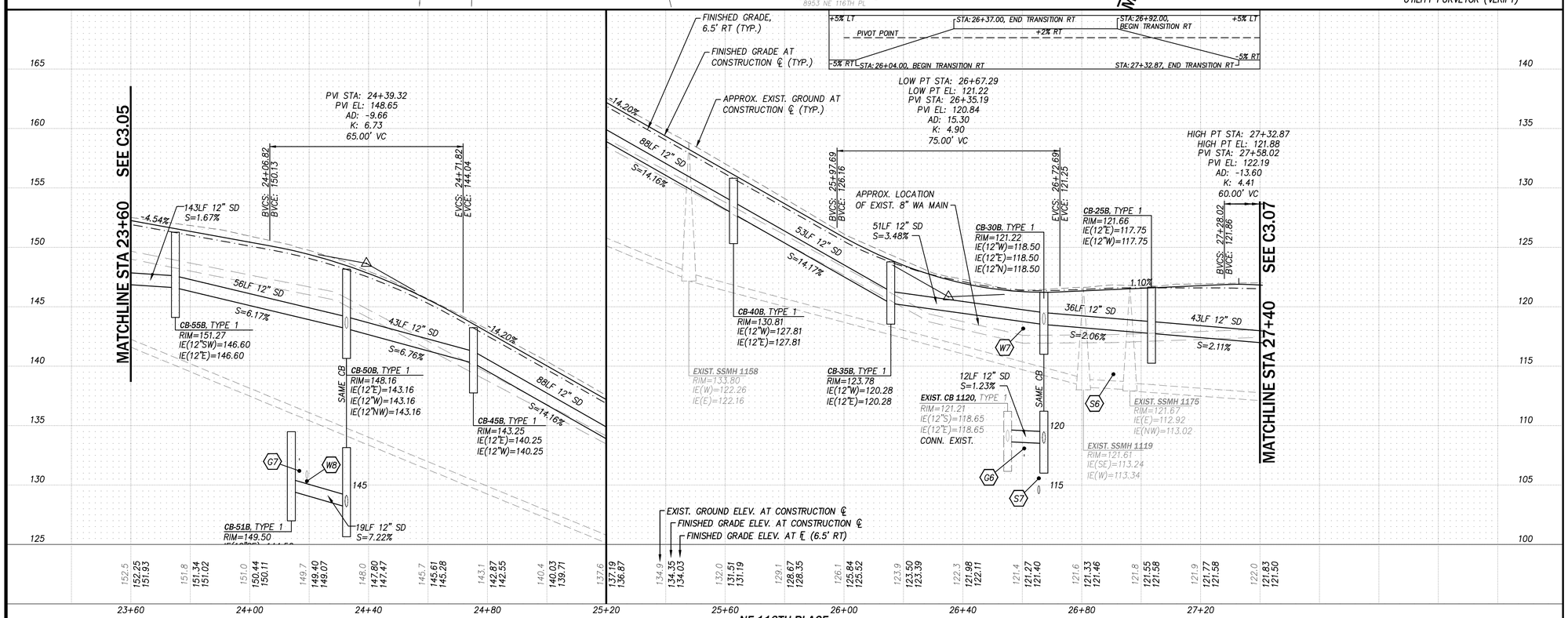
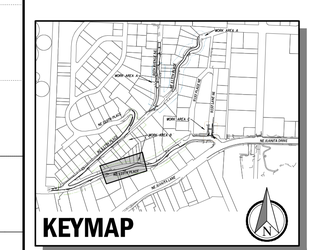
- ROCKERY
- TOP XXX (#) / TOE XXX — FINISHED GRADE AT TOP/TOE OF WALL
- STORM DRAIN PIPE
- WALL DRAIN
- SD — SD — EXIST. STORM DRAIN PIPE
- SD CATCH BASIN





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0 20 40 HORIZ. IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19–23–PW	MJH	MJH	AS NOTED	1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

ROADWAY IMPROVEMENTS PLAN AND PROFILE

C3.06

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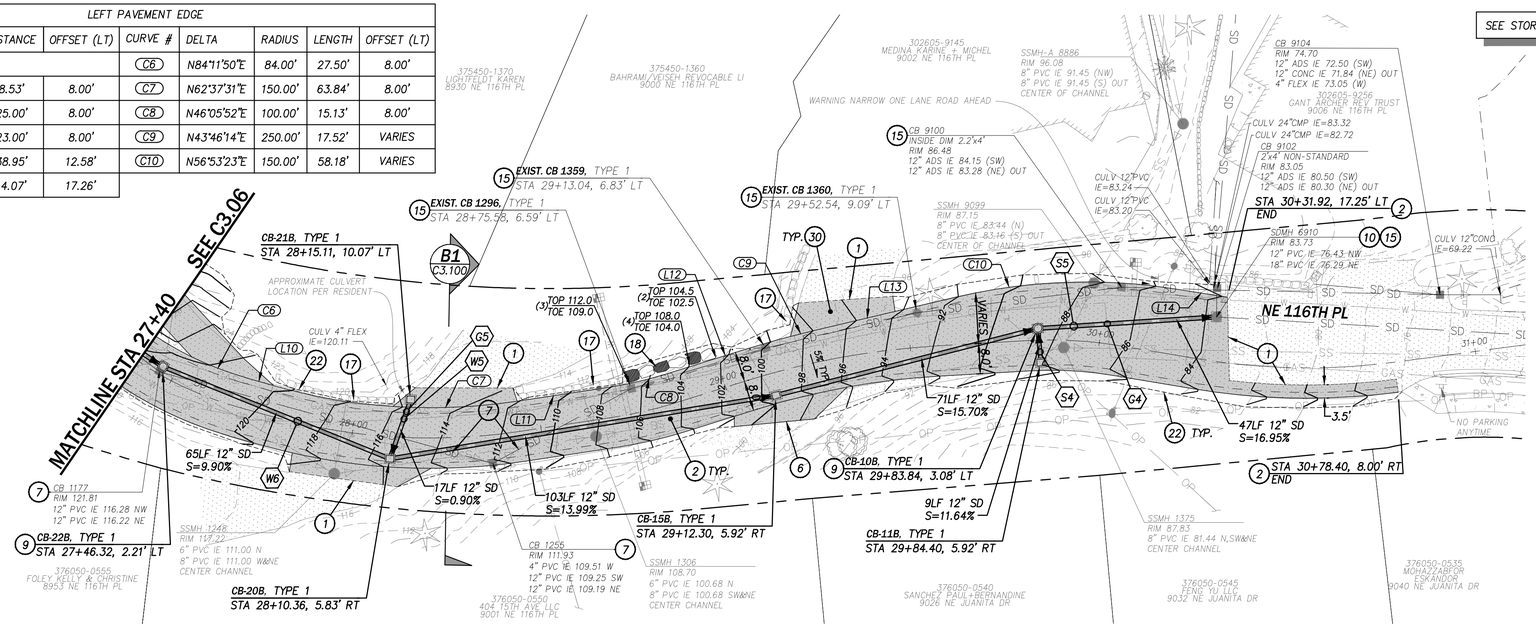
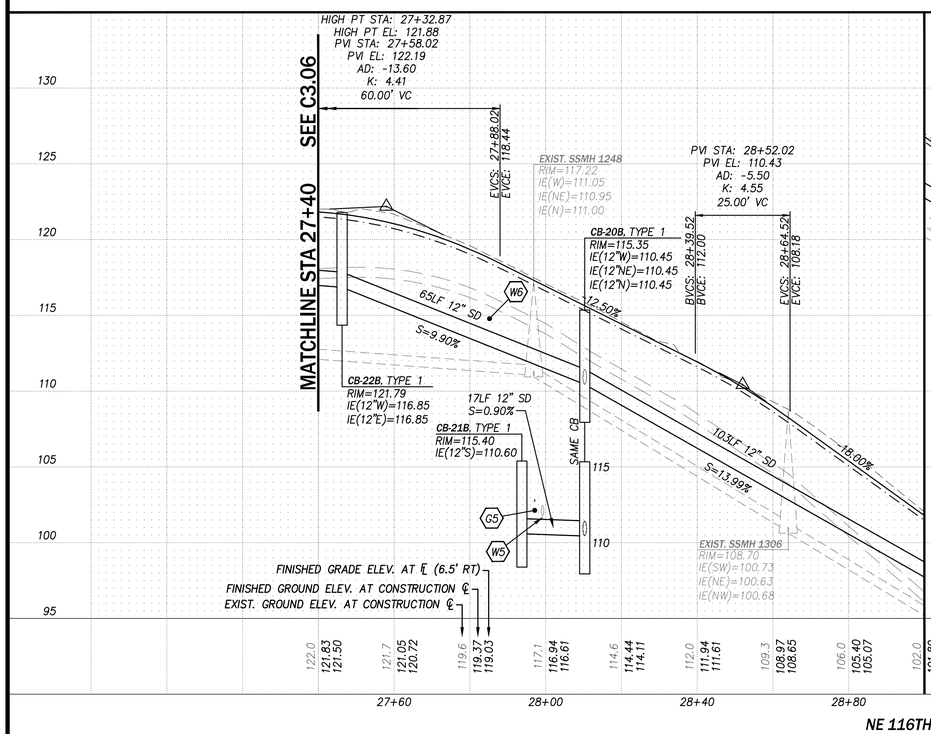
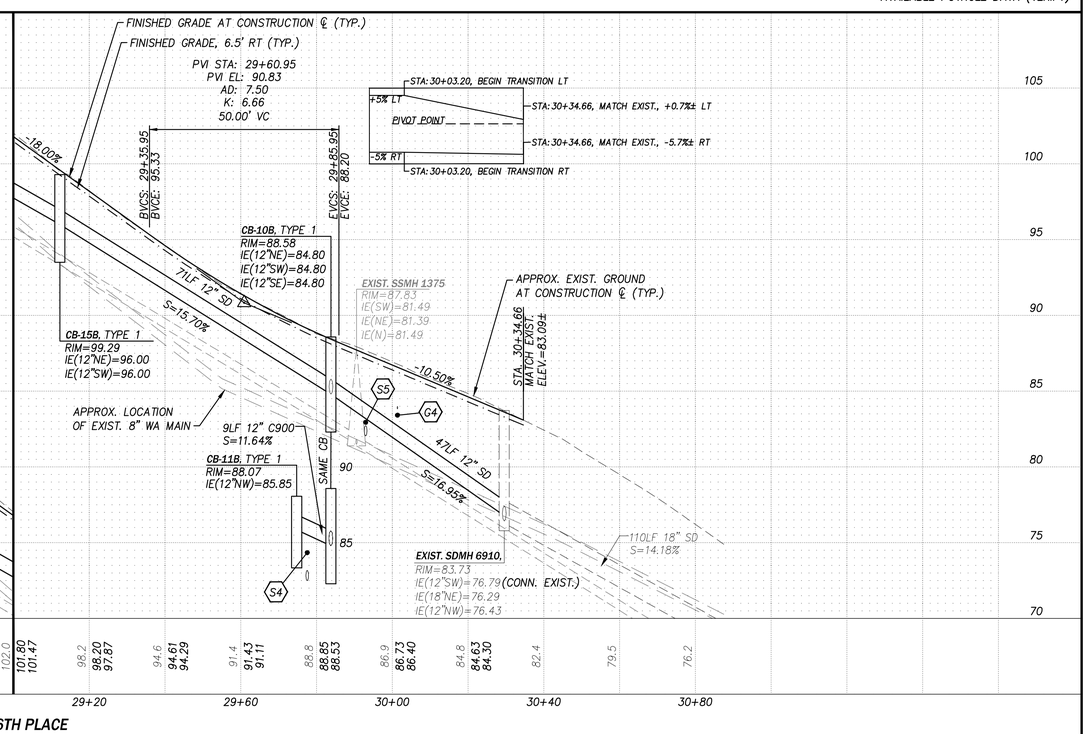
LEFT PAVEMENT EDGE								
LINE #	BEARING	DISTANCE	OFFSET (LT)	CURVE #	DELTA	RADIUS	LENGTH	OFFSET (LT)
POB=27+36.50, 7.00' LT				C6	N84°11'50"E	84.00'	27.50'	8.00'
L10	N74°49'06"E	8.53'	8.00'	C7	N62°37'31"E	150.00'	63.84'	8.00'
L11	N50°25'56"E	25.00'	8.00'	C8	N46°05'52"E	100.00'	15.13'	8.00'
L12	N41°45'48"E	23.00'	8.00'	C9	N43°46'14"E	250.00'	17.52'	VARIES
L13	N45°46'40"E	38.95'	12.58'	C10	N56°53'23"E	150.00'	58.18'	VARIES
L14	N68°00'06"E	14.07'	17.26'					



STORM PIPE CROSSING DATA	
STORM/SEWER PIPE CROSSINGS:	
S4	BOT 12" SD=85.53
	TOP 8" SS=83.17
S5	BOT 12" SD=83.09
	TOP 8" SS=82.72
STORM/WATER PIPE CROSSINGS:	
W5	BOT 8" WA=111.80*
	TOP 12" SD=111.55
W6	BOT 8" WA=115.62*
	TOP 12" SD=114.06
STORM/GAS PIPE CROSSINGS:	
G4	BOT 2" GAS=83.83*
	TOP 12" SD=82.25
G5	BOT 2" GAS=112.87*
	TOP 12" SD=111.57

*ESTIMATED DEPTH BASED ON AVAILABLE POTHOLE DATA (VERIFY)





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18. ROCKERY WALL PER COK PLAN CK–R.52
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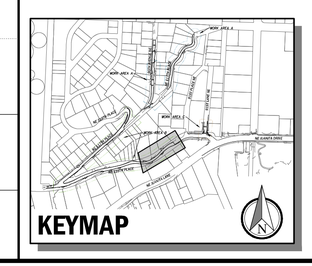

0 5 10 VERT. IN FEET
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CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

ROADWAY IMPROVEMENTS PLAN AND PROFILE

C3.07

20 / 51

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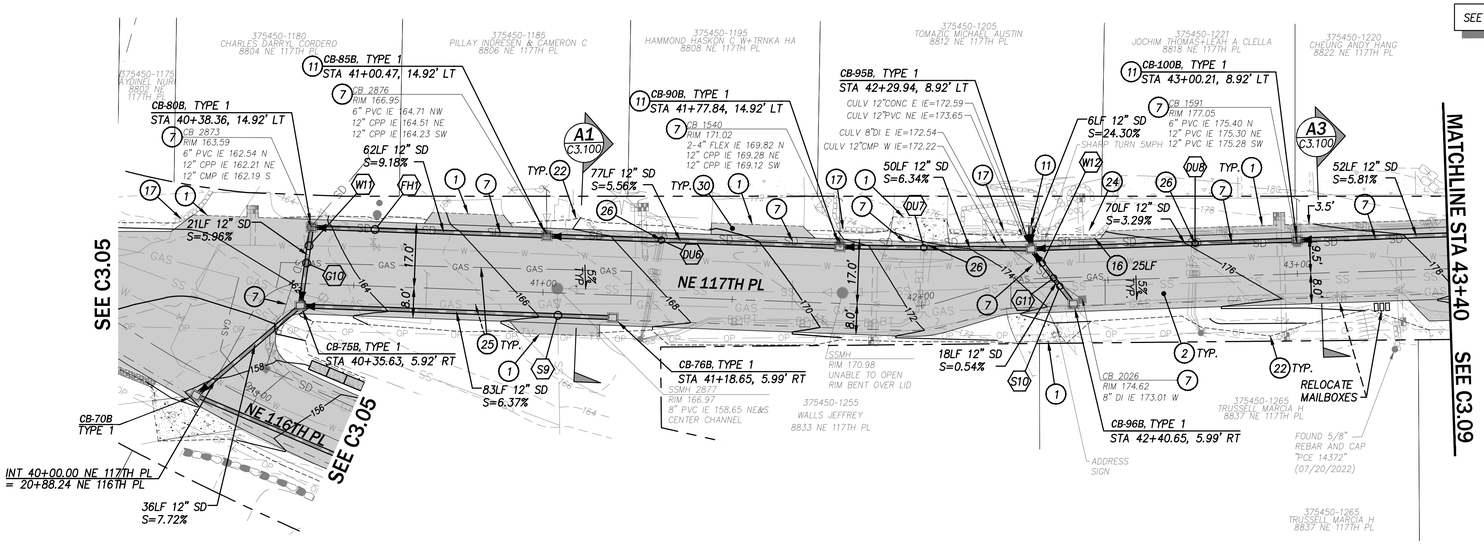
SEE STORM DRAINAGE FACILITY NOTES ON DRAWING C3.00.



STORM PIPE CROSSING DATA	
STORM/SEWER PIPE CROSSINGS:	
S9	BOT 12" SD=163.48
	TOP 8" SS=157.71
S10	BOT 12" SD=171.87
	TOP 8" SS=166.49
STORM/WATER PIPE CROSSINGS:	
W1	BOT 8" WA=159.49*
	TOP 12" SD=159.10
W12	BOT 12" SD=171.83
	TOP 8" WA=171.24*
FH1	BOT 6" WA=161.24*
	TOP 12" SD=160.94
STORM/GAS PIPE CROSSINGS:	
G10	BOT 2" GAS=159.33**
	TOP 12" SD=158.83
G11	BOT 12" SD=171.85
	TOP 2" GAS=170.85**
STORM/DRY UTILITY CROSSINGS:	
DU6	BOT 12" SD=165.78
	TOP BP,FO,COMM.=164.78**
DU7	BOT 12" SD=169.80
	TOP BP,COMM.=168.80**
DU8	BOT 12" SD=173.02
	TOP BP,COMM.=172.02**

*ESTIMATED DEPTH BASED ON AVAILABLE POTHOLE DATA (VERIFY)
**REQ'D. ELEV. WITH RELOCATION BY UTILITY PURVEYOR (VERIFY)

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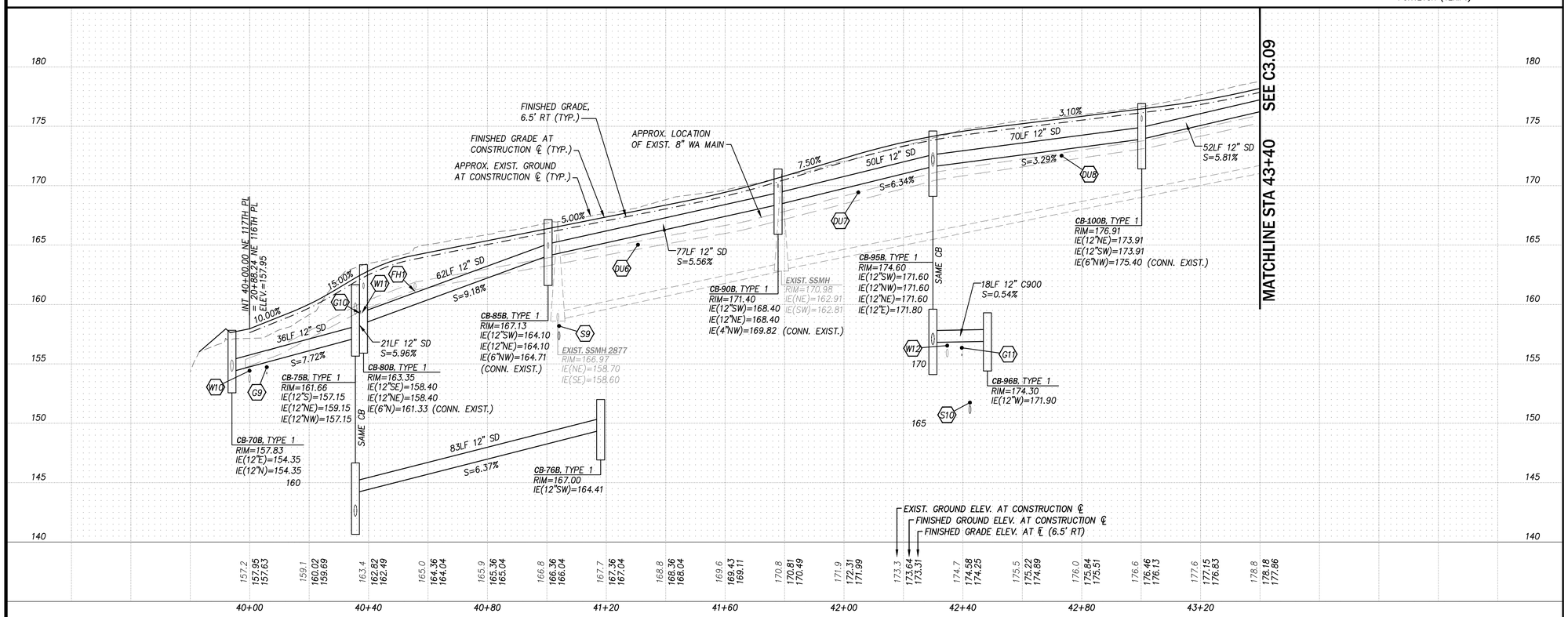

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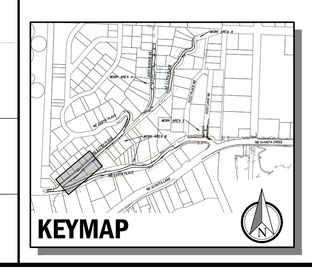

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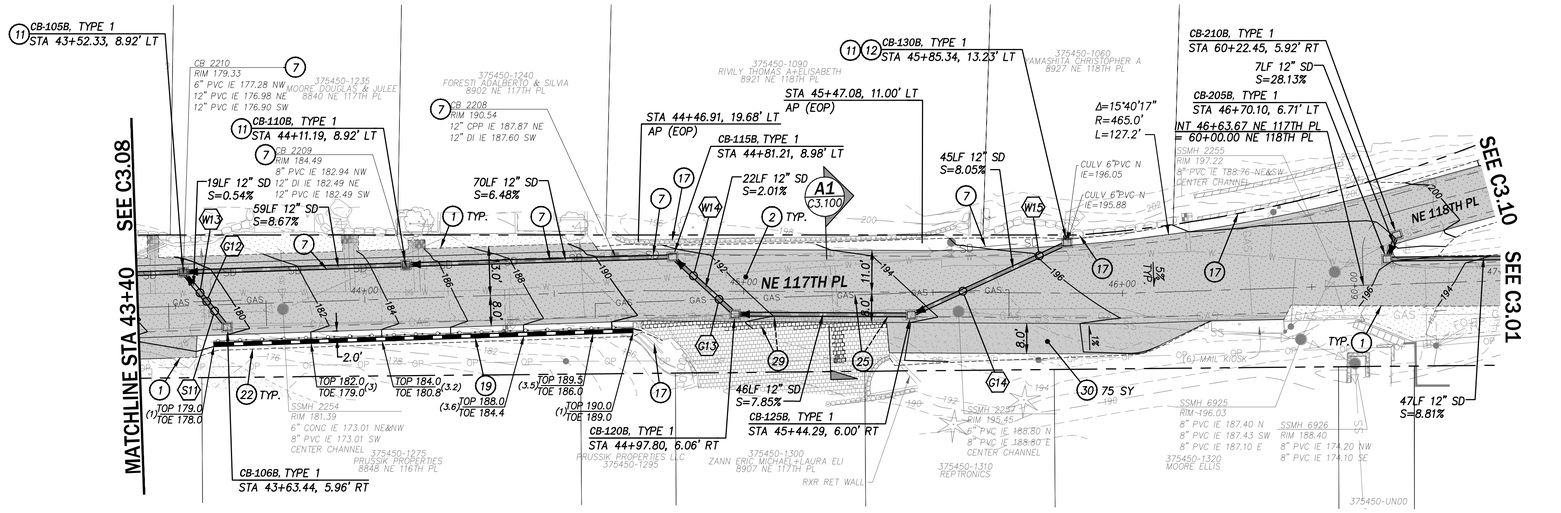
ROADWAY IMPROVEMENTS PLAN AND PROFILE

C3.08

21 / 51

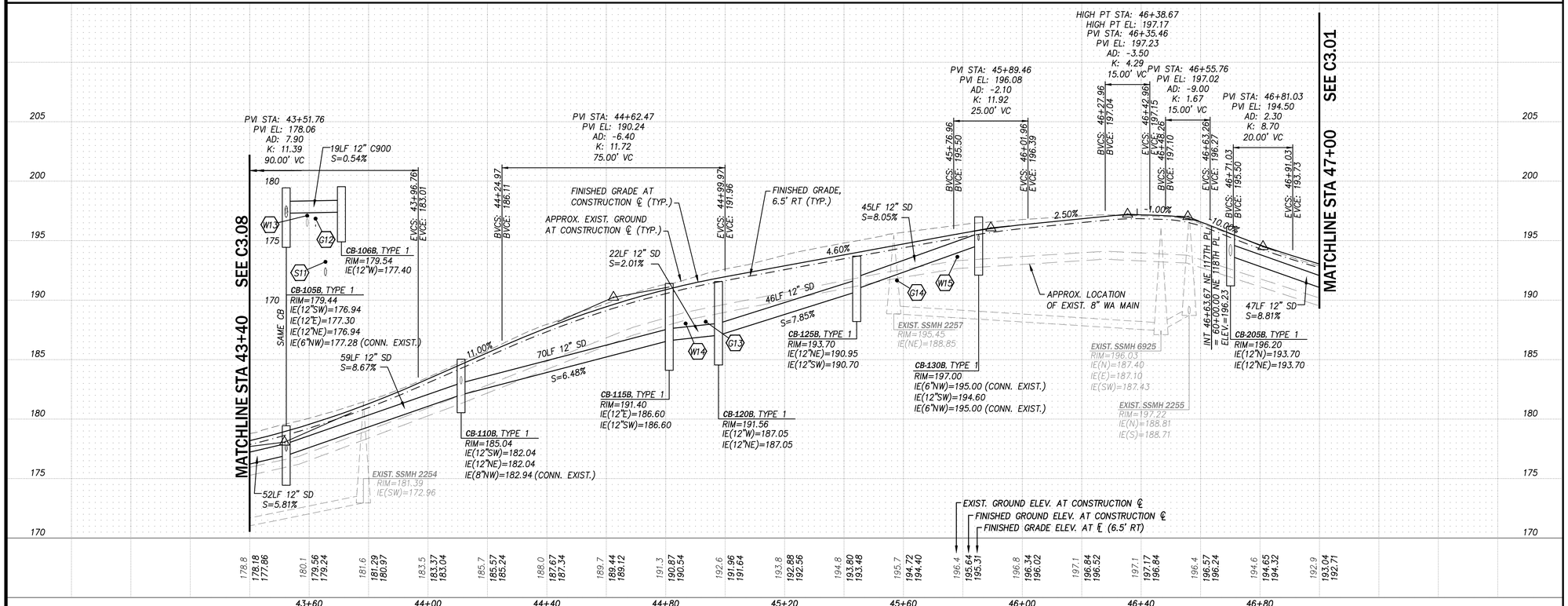
P:\project\0082\82014_Goat Hill SD\Dwg\Sheets\Storm Drainage Improvements-Phase 1\C3.08.dwg
1/5/2024 3:59 PM PETER EVANS

SEE STORM DRAINAGE FACILITY NOTES ON DRAWING C3.00.



STORM PIPE CROSSING DATA	
STORM/SEWER PIPE CROSSINGS:	
S1	BOT 12" SD=177.37
	TOP 8" SS=172.72
STORM/WATER PIPE CROSSINGS:	
W13	BOT 12" SD=177.34
	TOP 8" WA=176.87*
W14	BOT 12" SD=188.32
	TOP 8" WA=187.75*
W15	BOT 12" SD=193.96
	TOP 8" WA=193.31*
STORM/GAS PIPE CROSSINGS:	
G12	BOT 12" SD=177.35
	TOP 2" GAS=176.35**
G13	BOT 2" GAS=188.44**
	TOP 12" SD=187.44
G14	BOT 12" SD=192.15
	TOP 2" GAS=191.15**

*ESTIMATED DEPTH BASED ON AVAILABLE POTHOLE DATA (VERIFY)
**REQ'D. ELEV. WITH RELOCATION BY UTILITY PURVEYOR (VERIFY)

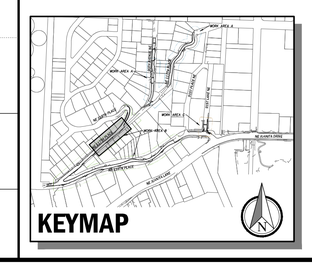


CONSTRUCTION NOTES

1. SAWCUT, MATCH EXIST. PAVEMENT
2. REMOVE, REPLACE EXIST. HMA PAVEMENT SEC. PER TYPICAL DET. ON C3.100
6. MATCH EXIST. PAVEMENT EDGE
7. REMOVE EXIST. SD PIPE AND/OR STRUCTURE, REF. TESC AND DEMOLITION PLAN SHTS. C1.01–C1.08
8. ABANDON EXIST. SD PIPE IN–PLACE, PLUG PIPE END FULL W/CEMENT CONC.
9. 24" MANHOLE FRAME W/LOCKING COVER AND LOGO PER COK PLAN CK–D.18, W/CIRCULAR RISER AND TRANSITION PER COK PLAN CK–D.07A
10. CONN. SD PIPE TO EXIST. CATCH BASIN STRUCTURE
11. CONN. EXIST. SD PIPE TO NEW CATCH BASIN STRUCTURE
12. TYPE 1 CATCH BASIN W/CONC. CHANNEL TO PIPE SPRINGLINE
13. TRENCH SEEPAGE BARRIER W/DRAIN PER DET. ON C3.101
14. RECTANGULAR BI–DIRECTIONAL VANED GRATE PER WSDOT STD. PLAN 30.40–03
15. ADJUST EXIST. SD FRAME, GRATE TO FINISH GRADE PER COK PLAN NO. CK–R.02
16. REMOVE EXIST. WALL/ROCKERY, APPROX. LENGTH PER PLAN
17. PROTECT EXIST. RETAINING WALL
18. ROCKERY WALL PER COK PLAN CK–R.52
19. MODULAR BLOCK RETAINING WALL PER TYP. SEC. ON C3.102 AND DET. ON DWG. C6.00–C6.02
20. GRAVITY BLOCK WALL, REF. DET. ON SHTS. C6.00 THRU C6.02
21. PERMANENT BUFFER IMPACT, APPROX. AREA PER PLAN
22. APPROX. LIMITS OF GRADING
23. PROTECT EXIST. MONUMENT, INSTALL NEW MON. CASE AND COVER PER COK PLAN CK–R.03
24. PROTECT EXIST. LANDSCAPING; RESTORE DISTURBED AREAS IN–KIND
25. REMOVE, RELOCATE EXIST. GAS MAIN (BY OTHERS, PSE)
26. RELOCATE EXIST. BURIED FRANCHISE UTILITY TO AVOID CONFLICT W/STORM OR WATER FACILITY (BY OTHERS)
28. RELOCATE EXIST. UTILITY POLE, GUY ANCHOR (BY OTHERS)
29. REMOVE, SALVAGE EXIST. CONC. PAVERS; RE–INSTALL SALVAGED CONC. PAVERS AT DRIVEWAY TO REPAIR DISTURBED AREAS
30. TYPICAL DRIVEWAY PAVEMENT SEC. PER DET. ON C3.100, REF. DETS. ON SHTS. C3.31–C3.41

LEGEND

- HMA PAVEMENT, REMOVE/REPLACE EXIST.
- CONCRETE PAVEMENT
- SAWCUT
- FLOWLINE OR GRADE BREAK AT THICKENED EDGE
- 100 — PROPOSED 2–FT CONTOUR
- 100 — EXISTING 2–FT CONTOUR
- GRAVITY BLOCK WALL
- MODULAR BLOCK (MSE) RETAINING WALL
- ROCKERY
- TOP XXX TOE XXX(#) — FINISHED GRADE AT TOP/TOE OF WALL
- STORM DRAIN PIPE
- WALL DRAIN
- SD — SD — EXIST. STORM DRAIN PIPE
- SD CATCH BASIN



0 5 10 VERT. IN FEET
0 20 40 HORIZ. IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19–23–PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
0	BID SET	PCE	MJH	12/27/23

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MATTHEW J. HOUSER, STATE OF WASHINGTON, 36655, PROFESSIONAL ENGINEER
1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

ROADWAY IMPROVEMENTS PLAN AND PROFILE

C3.09

22 / 51

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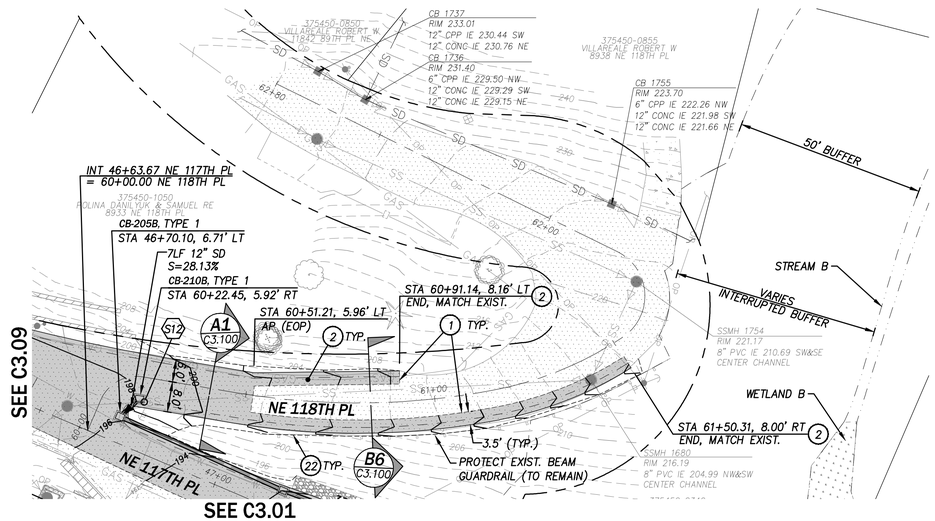
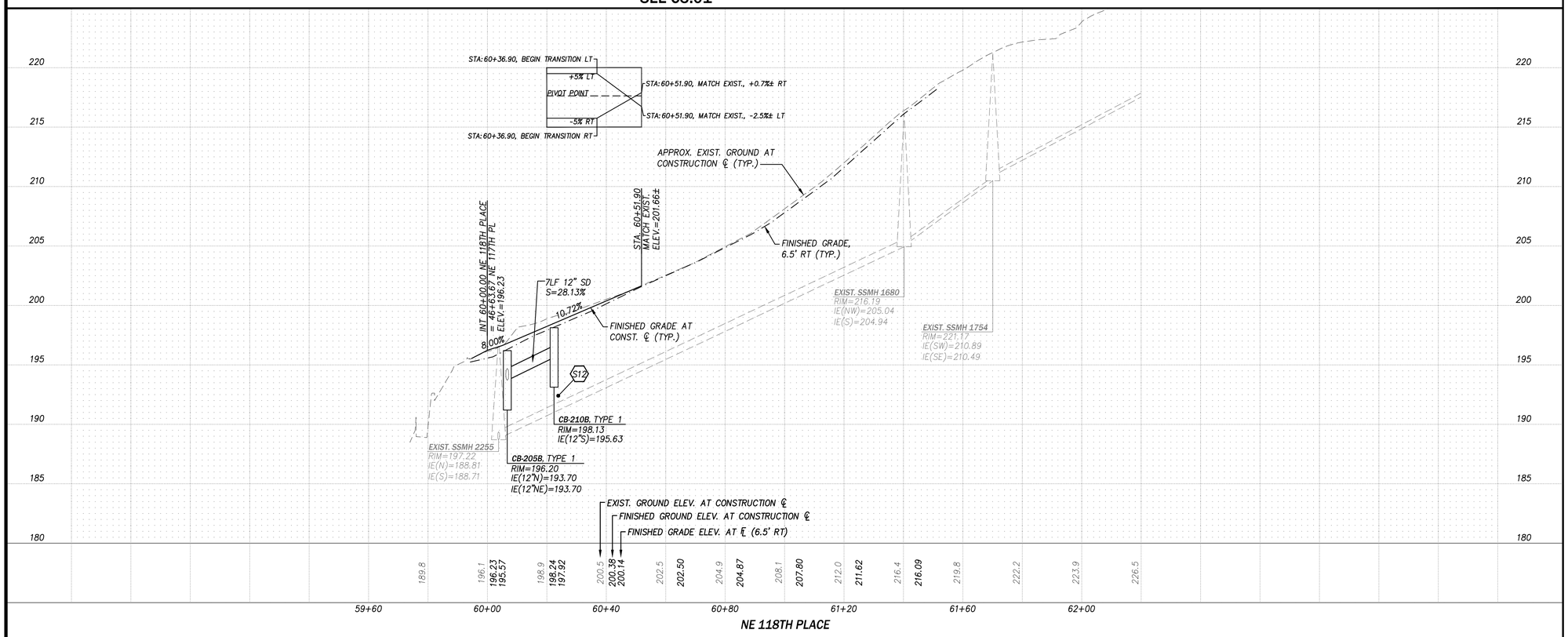
SEE STORM DRAINAGE FACILITY NOTES ON DRAWING C3.00.



UTILITY CROSSING DATA	
S12	BOT CB-210B=193.30
	TOP 8" SS=191.85



CONSTRUCTION NOTES

1. SAWCUT, MATCH EXIST. PAVEMENT
2. REMOVE, REPLACE EXIST. HMA PAVEMENT SEC. PER TYPICAL DET. ON C3.100
6. MATCH EXIST. PAVEMENT EDGE
7. REMOVE EXIST. SD PIPE AND/OR STRUCTURE, REF. TESC AND DEMOLITION PLAN SHTS. C1.01–C1.08
8. ABANDON EXIST. SD PIPE IN–PLACE, PLUG PIPE END FULL W/CEMENT CONC.
9. 24" MANHOLE FRAME W/LOCKING COVER AND LOGO PER COK PLAN CK–D.18, W/CIRCULAR RISER AND TRANSITION PER COK PLAN CK–D.07A
10. CONN. SD PIPE TO EXIST. CATCH BASIN STRUCTURE
11. CONN. EXIST. SD PIPE TO NEW CATCH BASIN STRUCTURE
12. TYPE 1 CATCH BASIN W/CONC. CHANNEL TO PIPE SPRINGLINE
13. TRENCH SEEPAGE BARRIER W/DRAIN PER DET. ON C3.101
14. RECTANGULAR BI–DIRECTIONAL VANED GRATE PER WSDOT STD. PLAN 30.40–03
15. ADJUST EXIST. SD FRAME, GRATE TO FINISH GRADE PER COK PLAN NO. CK–R.02
16. REMOVE EXIST. WALL/ROCKERY, APPROX. LENGTH PER PLAN
17. PROTECT EXIST. RETAINING WALL
18. ROCKERY WALL PER COK PLAN CK–R.52
19. MODULAR BLOCK RETAINING WALL PER TYP. SEC. ON C3.102 AND DET. ON DWG. C6.00–C6.02
20. GRAVITY BLOCK WALL, REF. DET. ON SHTS. C6.00 THRU C6.02
21. PERMANENT BUFFER IMPACT, APPROX. AREA PER PLAN
22. APPROX. LIMITS OF GRADING
23. PROTECT EXIST. MONUMENT, INSTALL NEW MON. CASE AND COVER PER COK PLAN CK–R.03
24. PROTECT EXIST. LANDSCAPING; RESTORE DISTURBED AREAS IN–KIND
25. REMOVE, RELOCATE EXIST. GAS MAIN (BY OTHERS, PSE)
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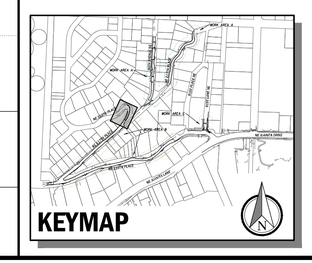
30. TYPICAL DRIVEWAY PAVEMENT SEC. PER DET. ON C3.100, REF. DETS. ON SHTS. C3.31–C3.41

LEGEND

- HMA PAVEMENT, REMOVE/REPLACE EXIST.
- CONCRETE PAVEMENT
- SAWCUT
- FLOWLINE OR GRADE BREAK AT THICKENED EDGE
- 100 — PROPOSED 2-FT CONTOUR
- 100 — EXISTING 2-FT CONTOUR
- GRAVITY BLOCK WALL
- MODULAR BLOCK (MSE) RETAINING WALL
- ROCKERY
- TOP XXX / TOE XXX (#) — FINISHED GRADE AT TOP/TOE OF WALL
- STORM DRAIN PIPE
- WALL DRAIN
- SD — SD — EXIST. STORM DRAIN PIPE
- SD CATCH BASIN



0 5 10 VERT. IN FEET
0 20 40 HORIZ. IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19–23–PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
0	BID SET	PCE	MJH	12/27/23

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

ROADWAY IMPROVEMENTS PLAN AND PROFILE

C3.10

23 / 51

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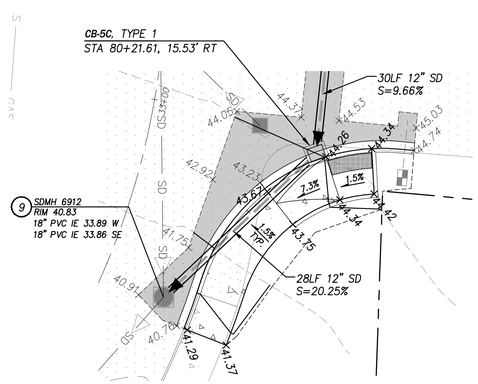
SEE STORM DRAINAGE FACILITY NOTES ON DRAWING C3.00.



1 RAMP DETAIL
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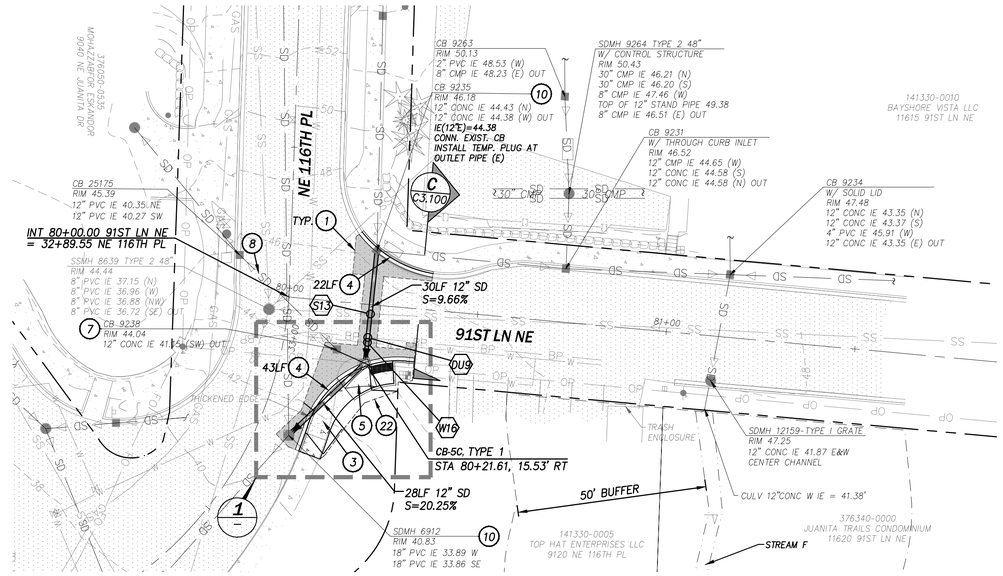


UTILITY CROSSING DATA	
STORM/SEWER PIPE CROSSINGS:	
S13	BOT 12" SD=42.76
	TOP 8" SS=37.98
STORM/WATER PIPE CROSSINGS:	
W16	BOT 12" SD=42.03
	TOP 8" WA=40.96*
STORM/DRY UTILITY CROSSINGS:	
DU9	BOT 12" SD=42.16
	TOP POWER=41.66*

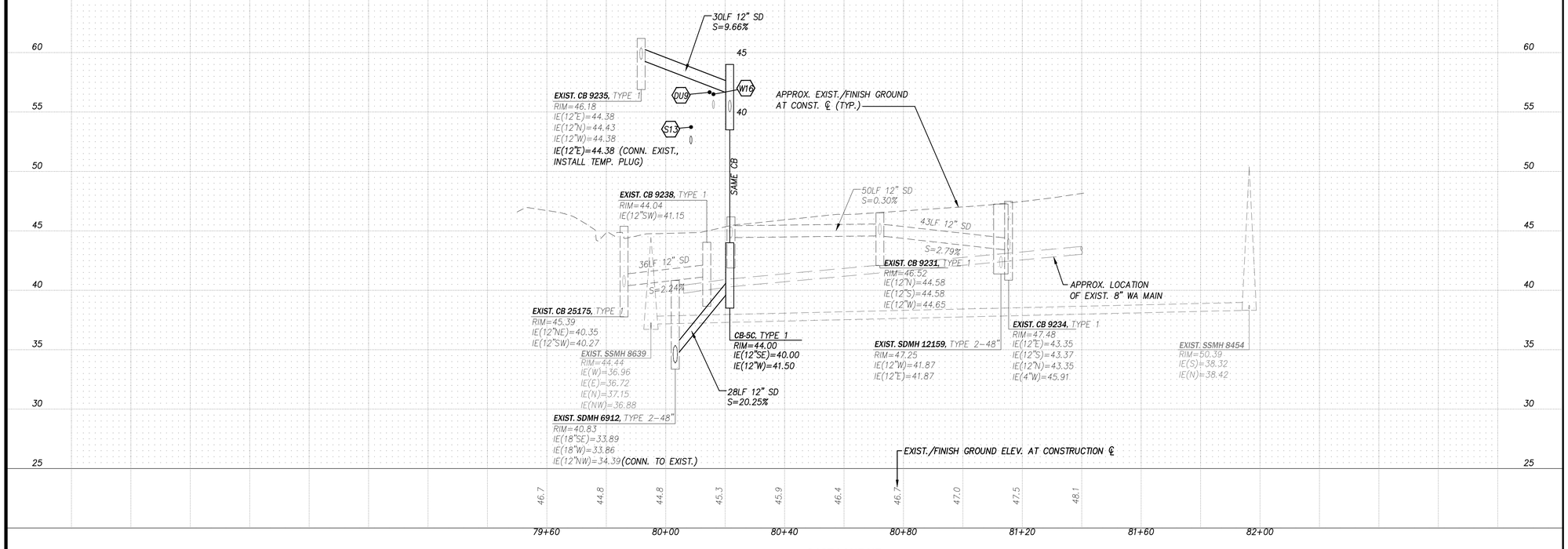
*ESTIMATED DEPTH BASED ON AVAILABLE POTHOLE DATA (VERIFY)

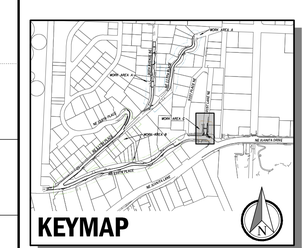
CONSTRUCTION NOTES

1. SAWCUT, REMOVE, AND REPLACE EXIST. PVMT. PER TYP. ROAD SECTION C ON C3.100
3. CEMENT CONC. SIDEWALK PER COK PLAN NO. CK-R.23
4. CEMENT CONC. CURB AND GUTTER, TYPE "A" PER COK PLAN NO. CK-R.17, APPROX. LENGTH PER PLAN
5. PARALLEL CURB RAMP TYPE B PER WSDOT STD. PLAN F-40.12-03
7. REMOVE EXIST. SD PIPE AND/OR STRUCTURE, REF. TESC AND DEMOLITION PLAN SHTS. C1.01-C1.08
8. ABANDON EXIST. SD PIPE IN-PLACE, PLUG PIPE END FULL W/CEMENT CONC.
10. CONN. SD PIPE TO EXIST. CATCH BASIN STRUCTURE
22. APPROX. LIMITS OF GRADING

LEGEND

- HMA PAVEMENT, REMOVE/REPLACE EXIST.
- CONCRETE PAVEMENT
- SAWCUT
- 100 — PROPOSED 2-FT CONTOUR
- 100 — EXISTING 2-FT CONTOUR
- GRAVITY BLOCK WALL
- MODULAR BLOCK (MSE) RETAINING WALL
- ROCKERY
- TOP XXX / TOE XXX (#) — FINISHED GRADE AT TOP/TOE OF WALL
- STORM DRAIN PIPE
- WALL DRAIN
- SD — SD — EXIST. STORM DRAIN PIPE
- SD CATCH BASIN





0 5 10 VERT. IN FEET
0 20 40 HORIZ. IN FEET

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SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION - PHASE 1

ROADWAY IMPROVEMENTS PLAN AND PROFILE

C3.11

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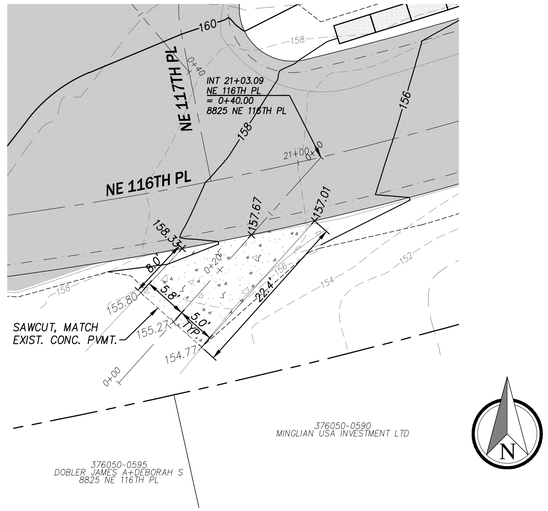

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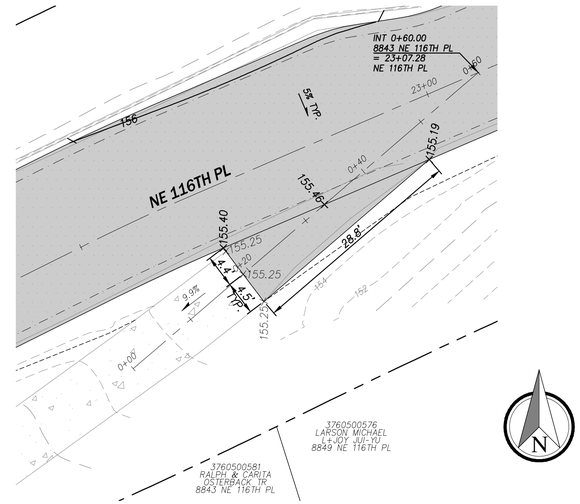

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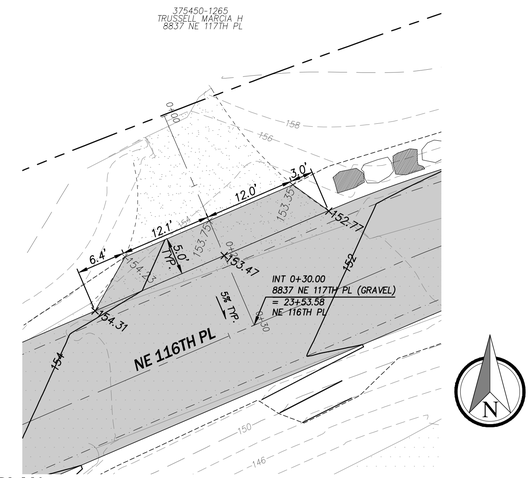

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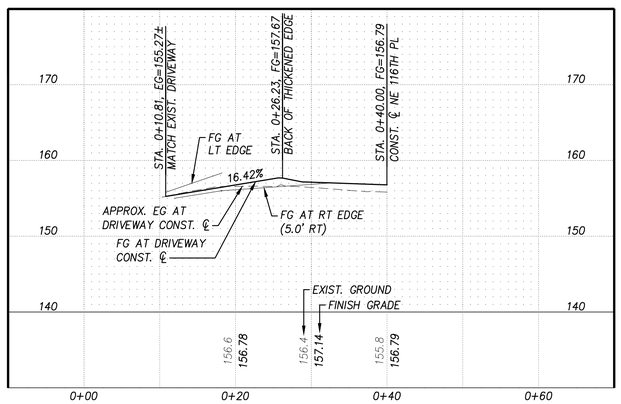
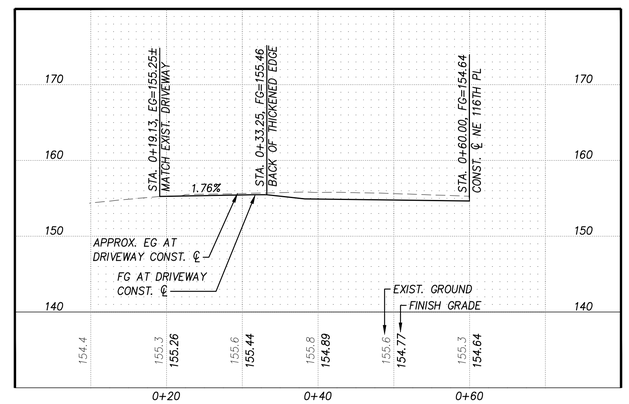
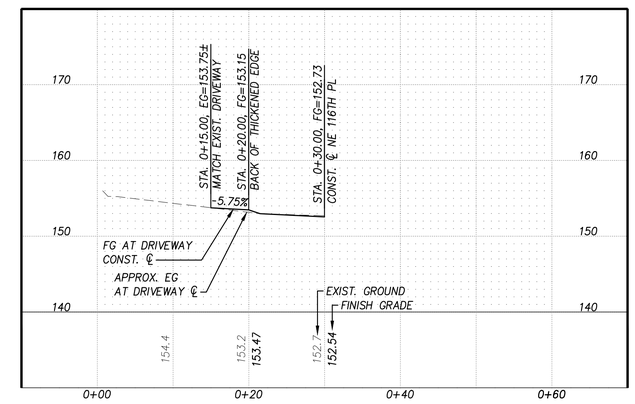


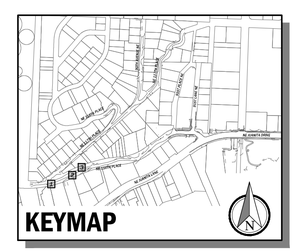
1 C3.05 TYPICAL DRIVEWAY DETAIL



2 C3.05 TYPICAL DRIVEWAY DETAIL



3 C3.05 TYPICAL DRIVEWAY DETAIL



LEGEND

×100.00	EXIST. GRADE ELEVATION
×100.00	FINISHED GRADE ELEVATION
1.0%	EXIST. GRADE SLOPE
1.0%	FINISHED GRADE SLOPE

0 10 20 VERT. IN FEET

0 10 20 HORIZ. IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
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REGISTERED PROFESSIONAL ENGINEER
1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

DRIVEWAY PROFILES

C3.31

25 / 51

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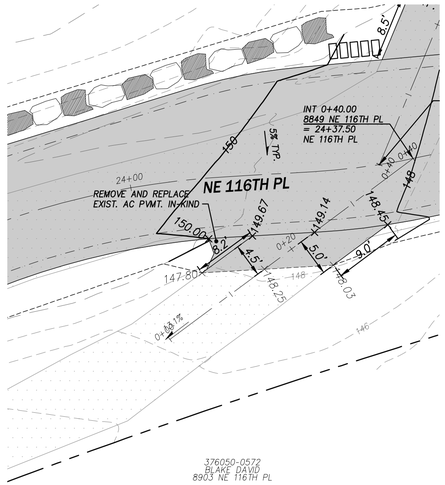
1/5/2024 4:08 PM PETER EVANS



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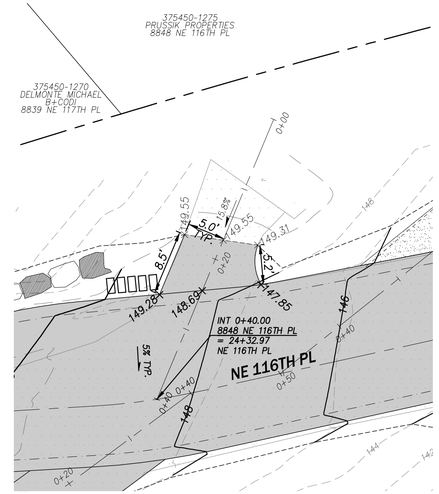

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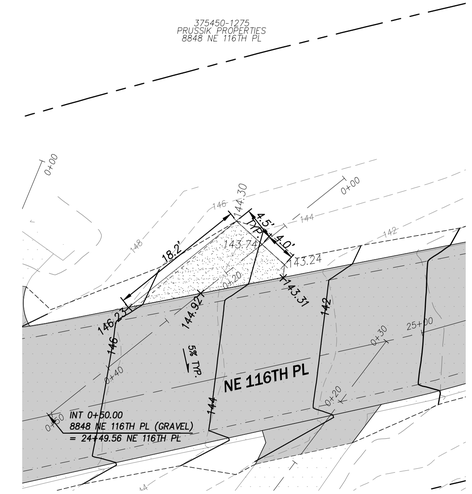

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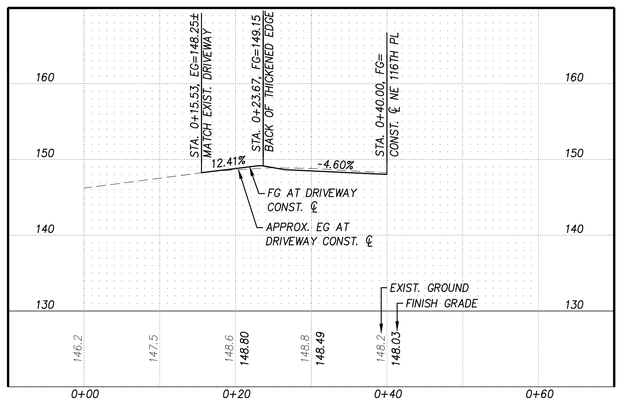
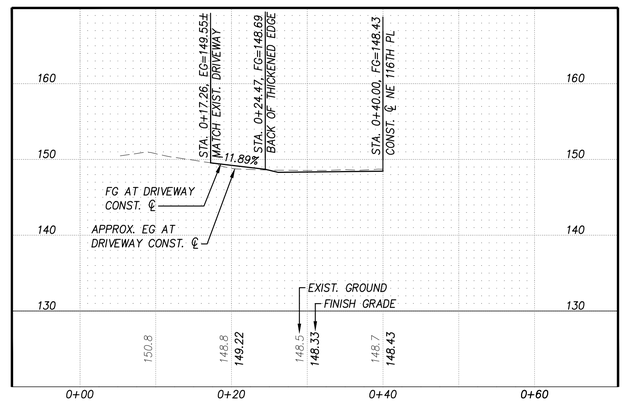
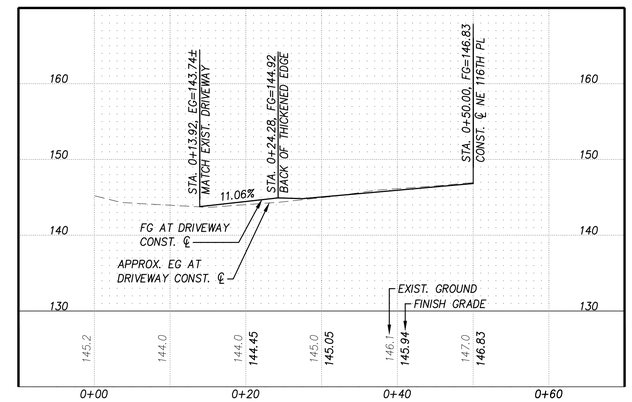


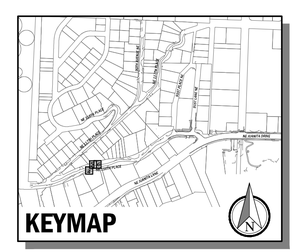
4 C3.06 TYPICAL DRIVEWAY DETAIL



5 C3.06 TYPICAL DRIVEWAY DETAIL



6 C3.06 TYPICAL DRIVEWAY DETAIL



LEGEND

×100.00	EXIST. GRADE ELEVATION
×100.00	FINISHED GRADE ELEVATION
1.0%	EXIST. GRADE SLOPE
1.0%	FINISHED GRADE SLOPE

0 10 20 VERT. IN FEET

0 10 20 HORIZ. IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
0	BID SET	PCE	MJH	12/27/23

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

DRIVEWAY PROFILES

C3.32

26 / 51

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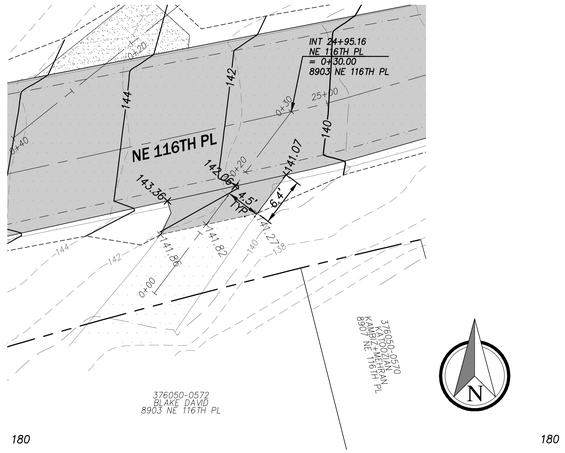

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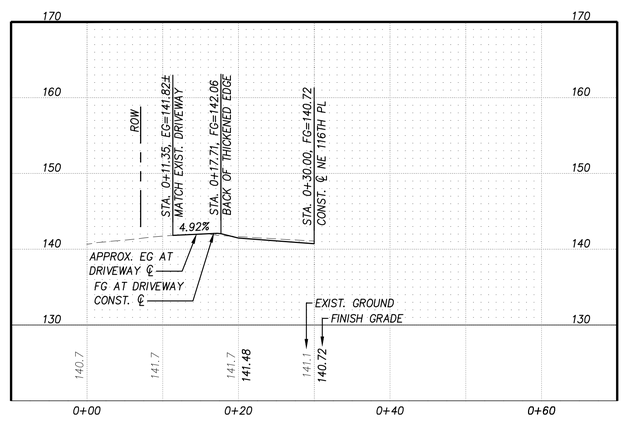

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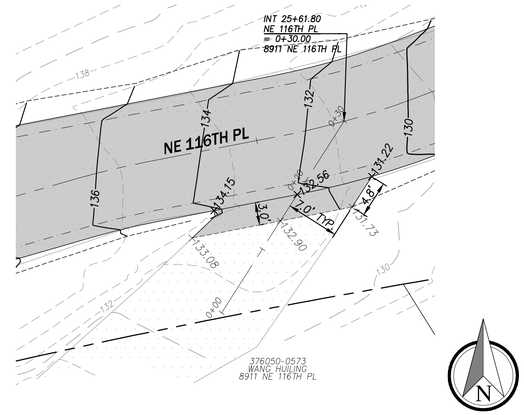
C3.06



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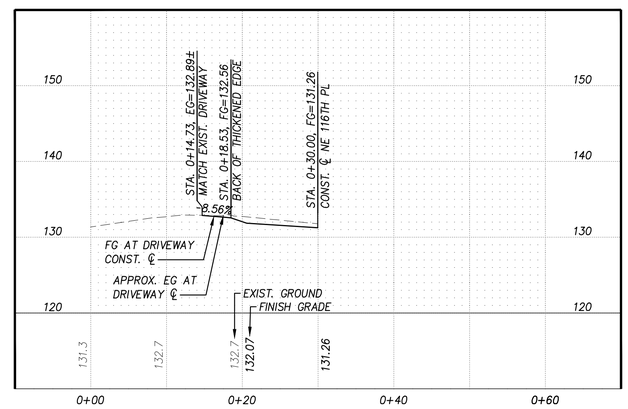

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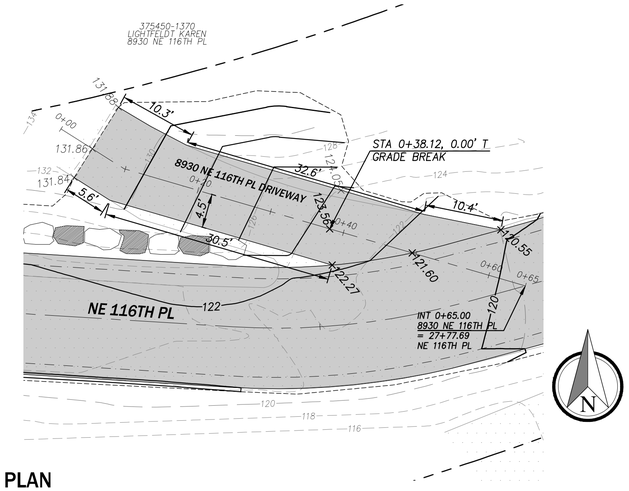
C3.06



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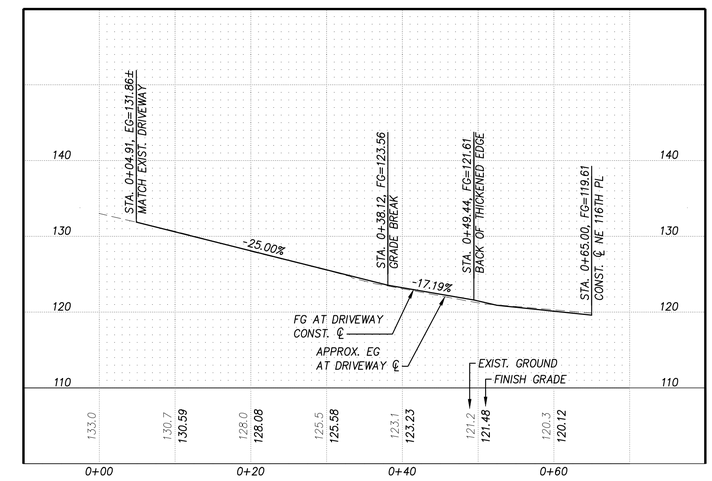

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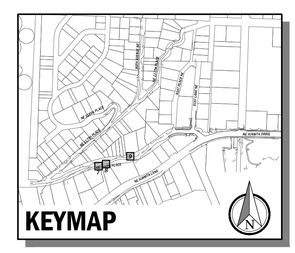
C3.07



LEGEND

×100.00	EXIST. GRADE ELEVATION
×100.00	FINISHED GRADE ELEVATION
1.0%	EXIST. GRADE SLOPE
1.0%	FINISHED GRADE SLOPE

0 10 20 VERT. IN FEET
0 10 20 HORIZ. IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

DRIVEWAY PROFILES

C3.33

27 / 51

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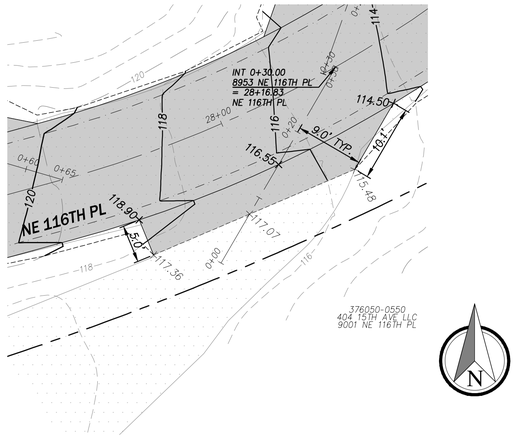

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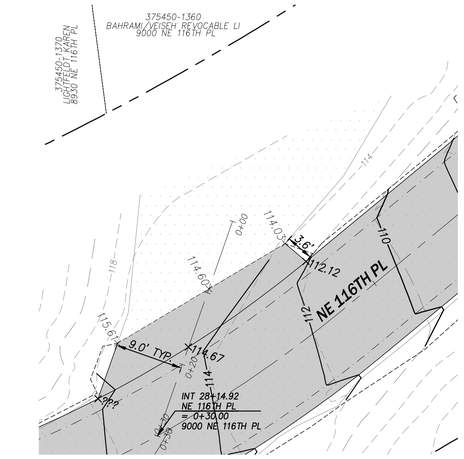

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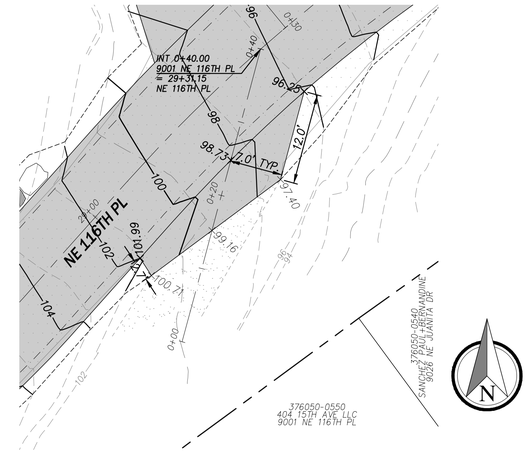

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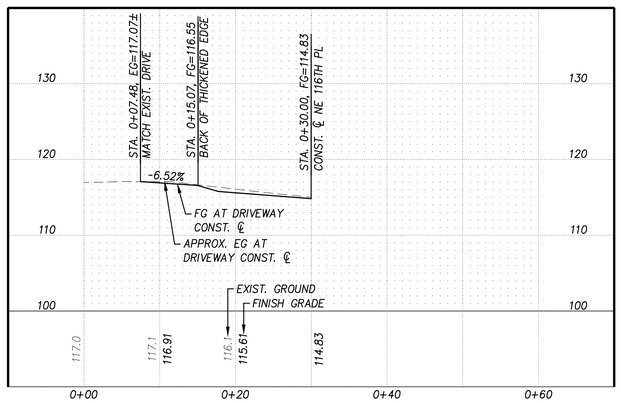

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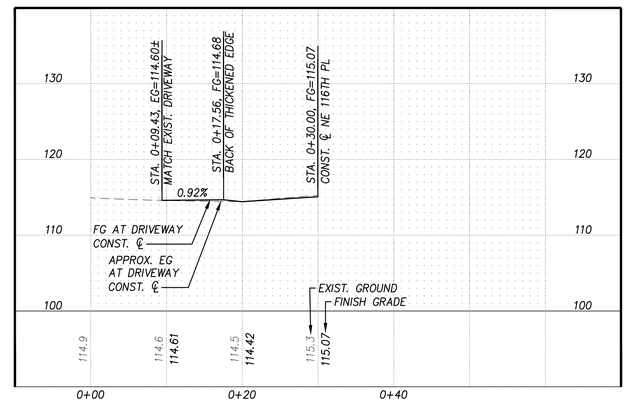

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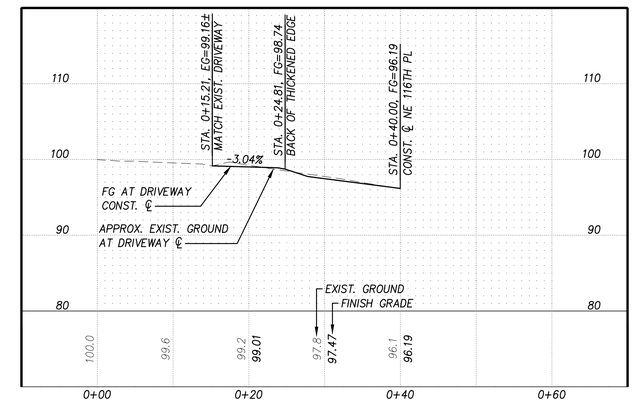

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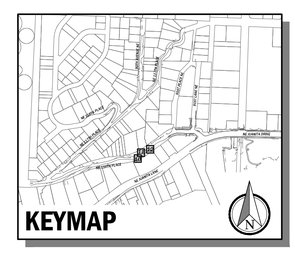

LEGEND

×100.00	EXIST. GRADE ELEVATION
×100.00	FINISHED GRADE ELEVATION
1.0%	EXIST. GRADE SLOPE
1.0%	FINISHED GRADE SLOPE

0 10 20 VERT. IN FEET

0 10 20 HORIZ. IN FEET

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DRIVEWAY PROFILES

C3.34

28 / 51

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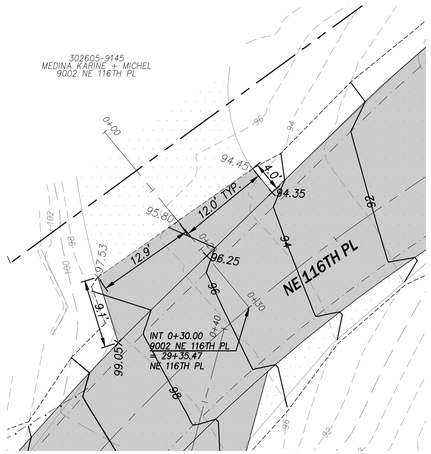

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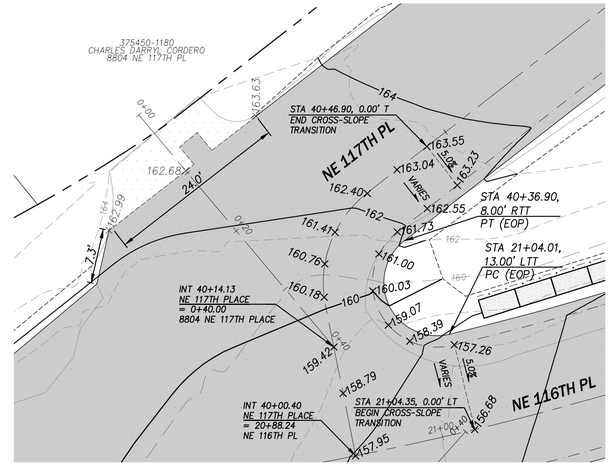

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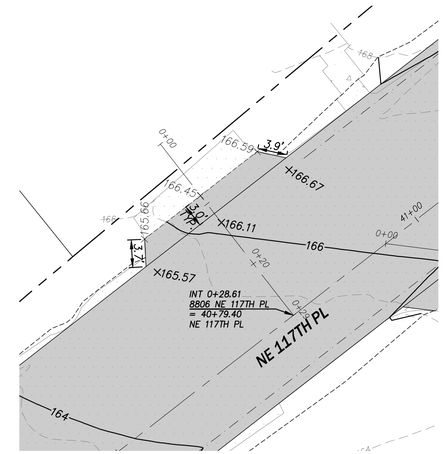

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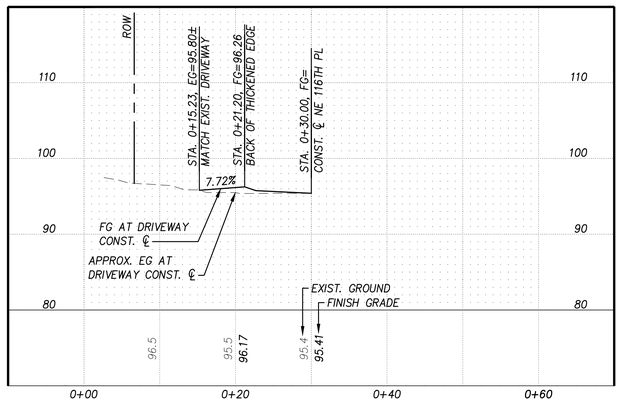
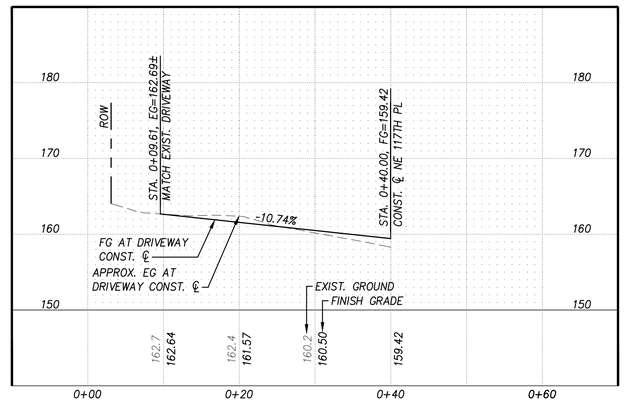


13 TYPICAL DRIVEWAY DETAIL
C3.07



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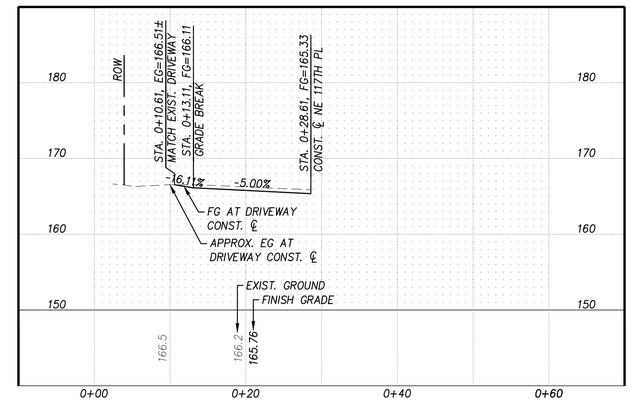
C3.08



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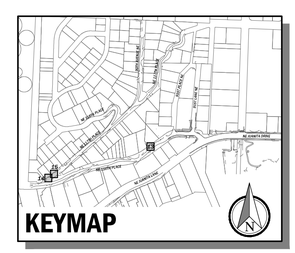
C3.08



LEGEND

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×100.00	FINISHED GRADE ELEVATION
1.0%	EXIST. GRADE SLOPE
1.0%	FINISHED GRADE SLOPE

0 10 20 VERT. IN FEET

0 10 20 HORIZ. IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
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DRIVEWAY PROFILES

C3.35

29 / 51

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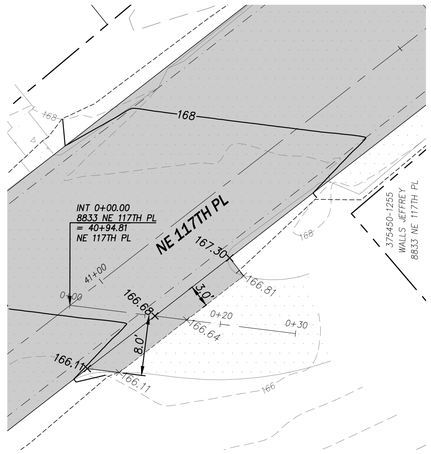

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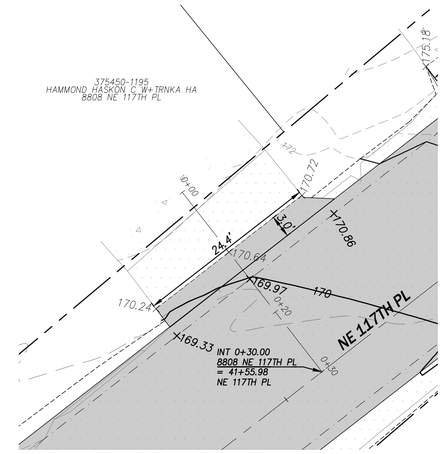

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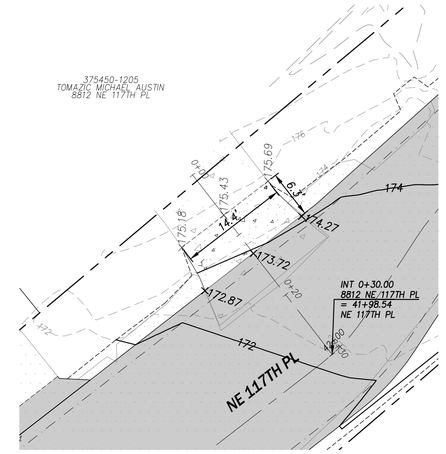

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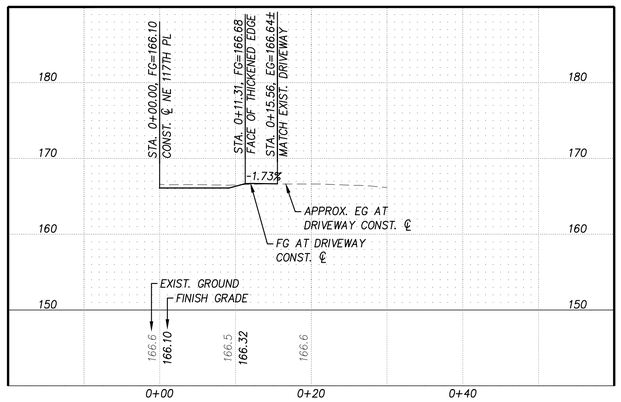

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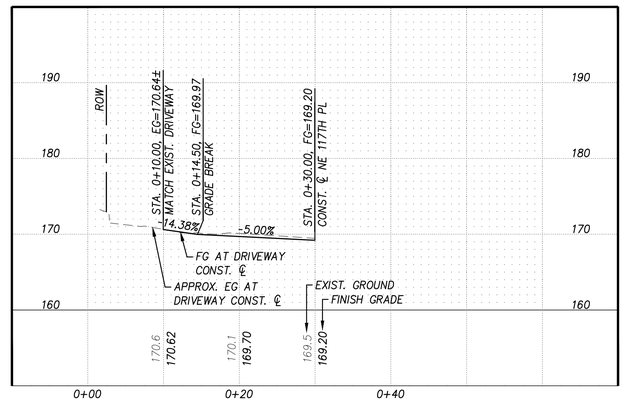

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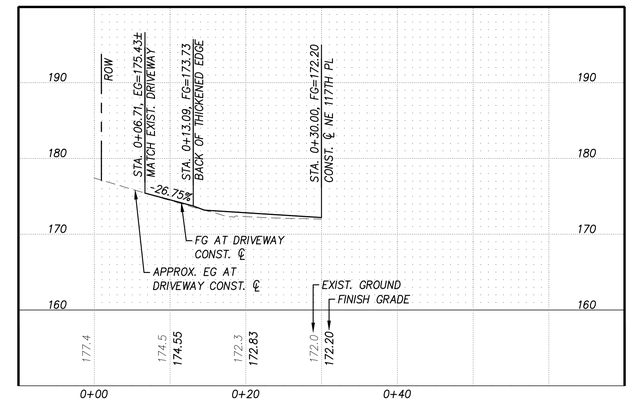

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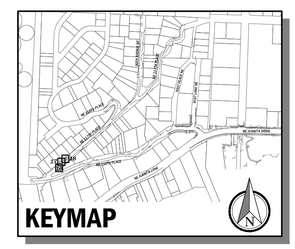

LEGEND

×100.00	EXIST. GRADE ELEVATION
×100.00	FINISHED GRADE ELEVATION
1.0%	EXIST. GRADE SLOPE
1.0%	FINISHED GRADE SLOPE

0 10 20 VERT. IN FEET

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DRIVEWAY PROFILES

C3.36

30 / 51

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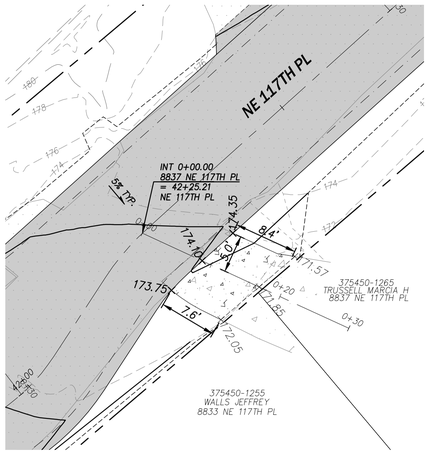

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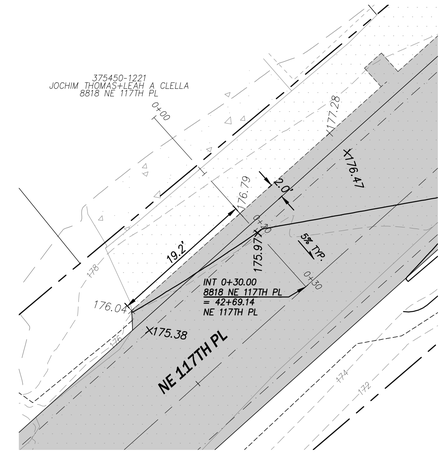

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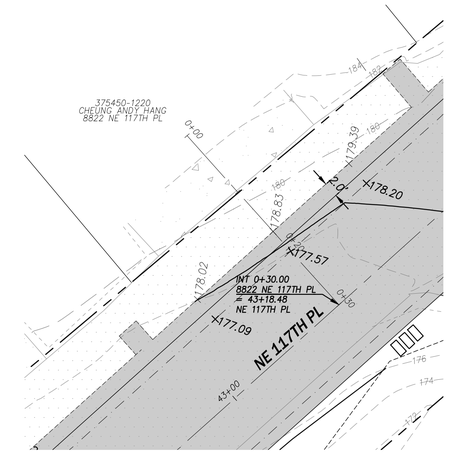

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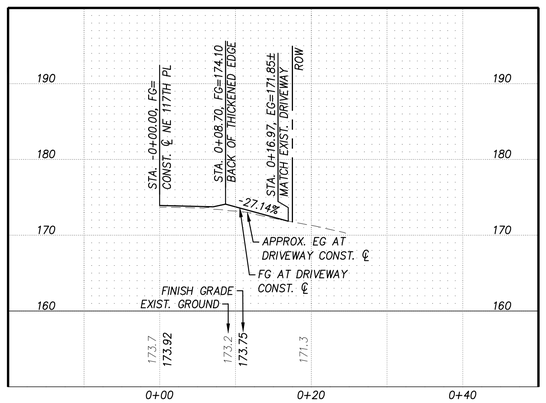
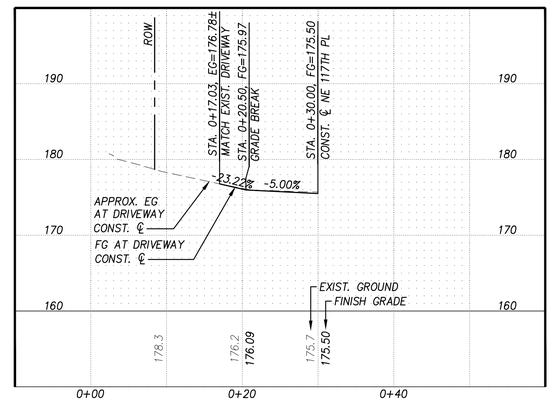


19 C3.XX TYPICAL DRIVEWAY DETAIL



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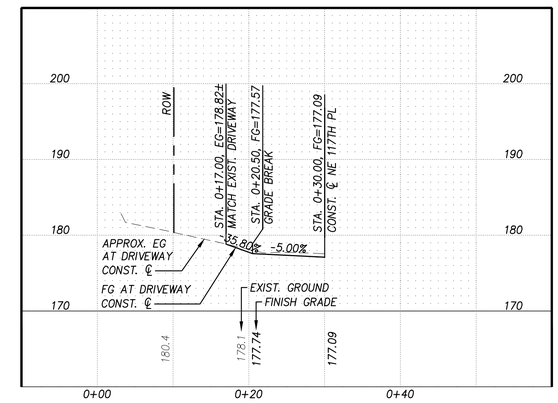

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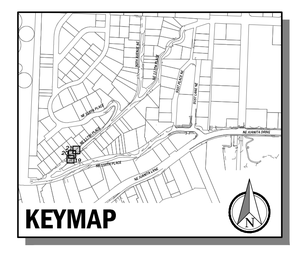

LEGEND

×100.00	EXIST. GRADE ELEVATION
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0	BID SET	PCE	MJH	12/27/23

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

DRIVEWAY PROFILES

C3.37

31 / 51

P:\project\0082\2014_Goat Hill SD\Dwg\Sheets\Storm Drainage Improvements-Phase 1\C3.37.dwg
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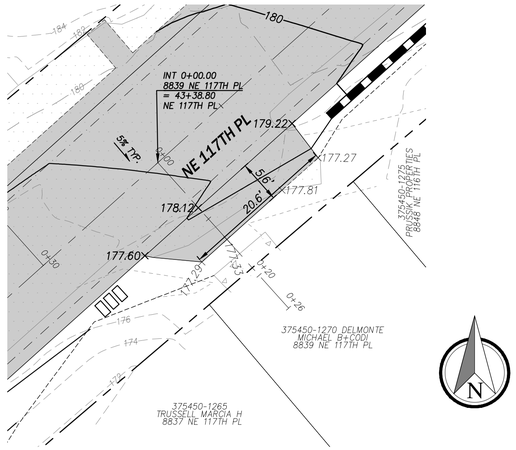

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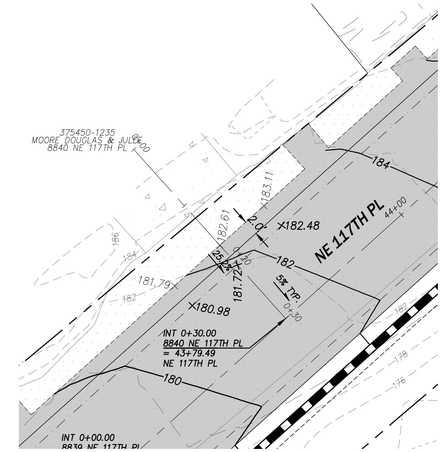

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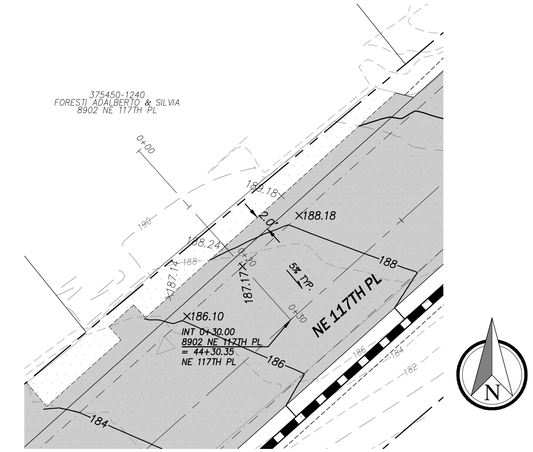

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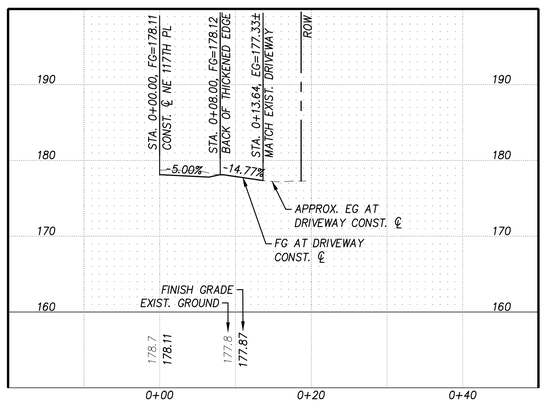
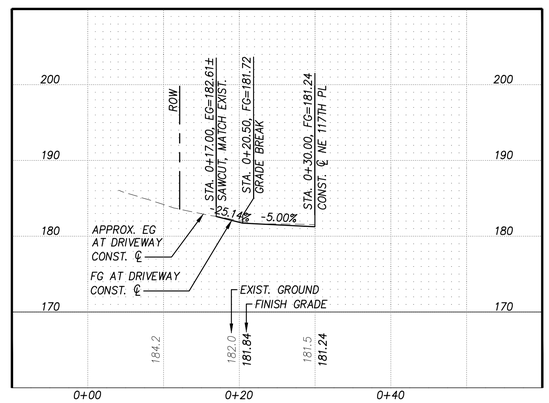


22 C3.XX TYPICAL DRIVEWAY DETAIL



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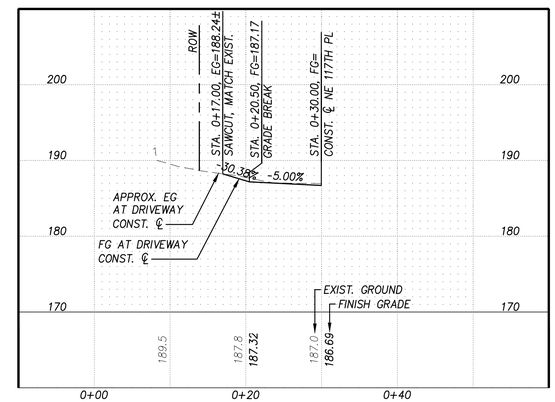
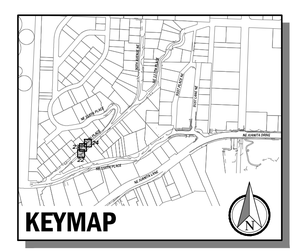


24 C3.XX TYPICAL DRIVEWAY DETAIL



LEGEND

×100.00	EXIST. GRADE ELEVATION
×100.00	FINISHED GRADE ELEVATION
1.0%	EXIST. GRADE SLOPE
1.0%	FINISHED GRADE SLOPE

0 10 20 VERT. IN FEET

0 10 20 HORIZ. IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
0	BID SET	PCE	MJH	12/27/23

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DRIVEWAY PROFILES

C3.38

32 / 51

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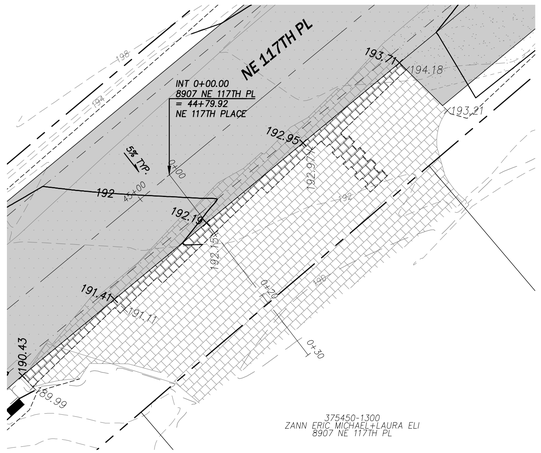

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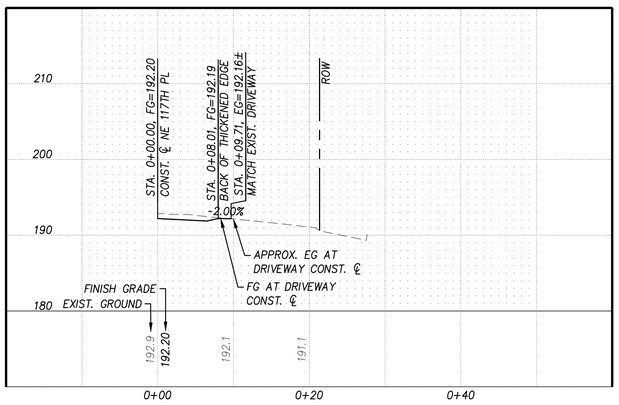
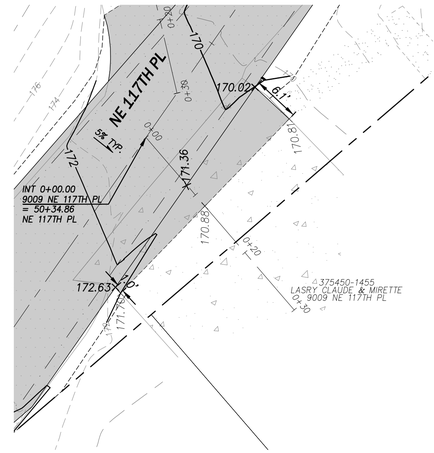


25 C3.09 TYPICAL DRIVEWAY DETAIL



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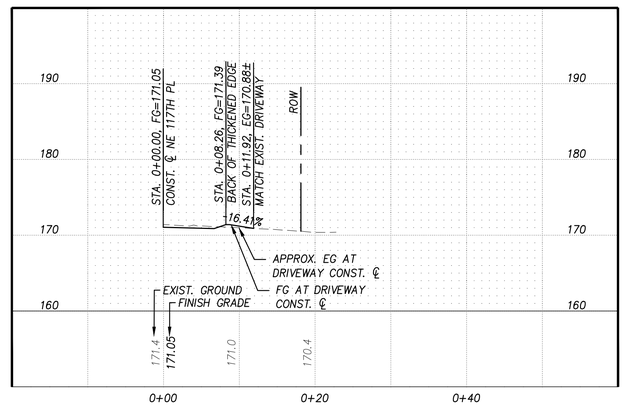
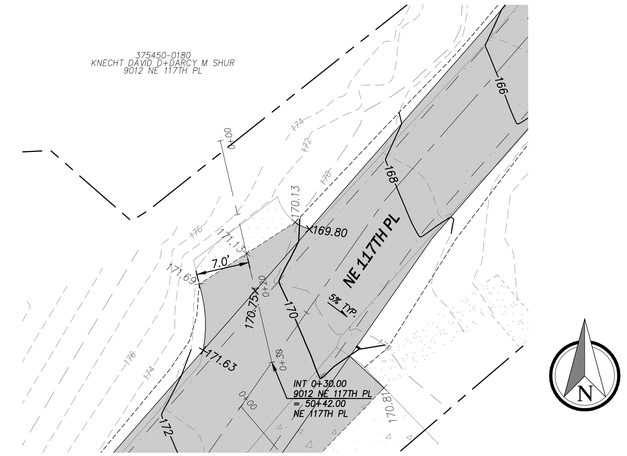


26 C3.01 TYPICAL DRIVEWAY DETAIL



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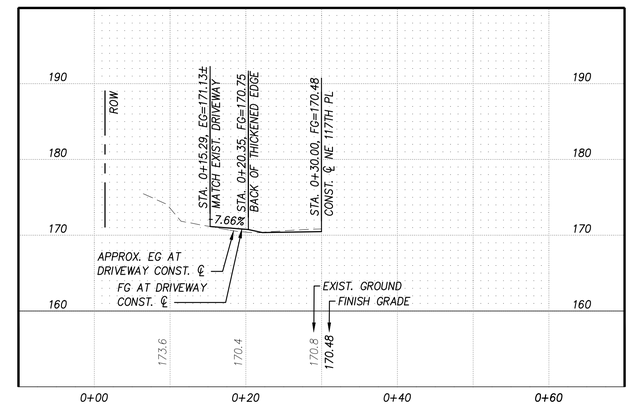
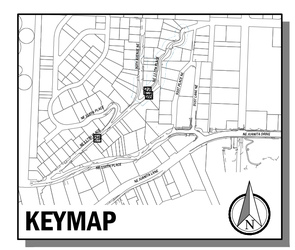


27 C3.01 TYPICAL DRIVEWAY DETAIL



LEGEND

×100.00	EXIST. GRADE ELEVATION
×100.00	FINISHED GRADE ELEVATION
1.0%	EXIST. GRADE SLOPE
1.0%	FINISHED GRADE SLOPE

0 10 20 VERT. IN FEET

0 10 20 HORIZ. IN FEET

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DRIVEWAY PROFILES

C3.39

33 / 51

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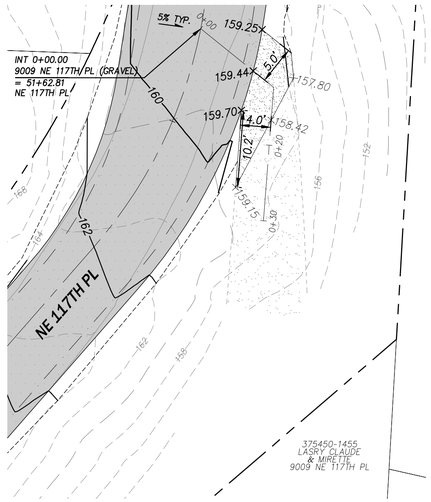
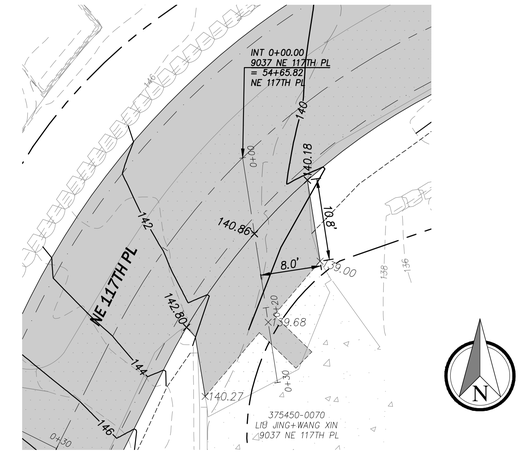


PLAN

PLAN



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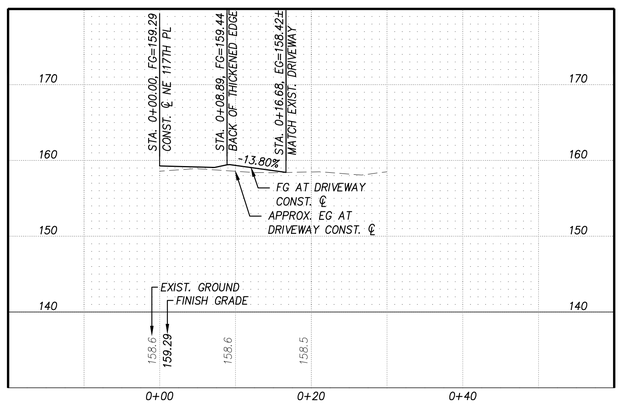
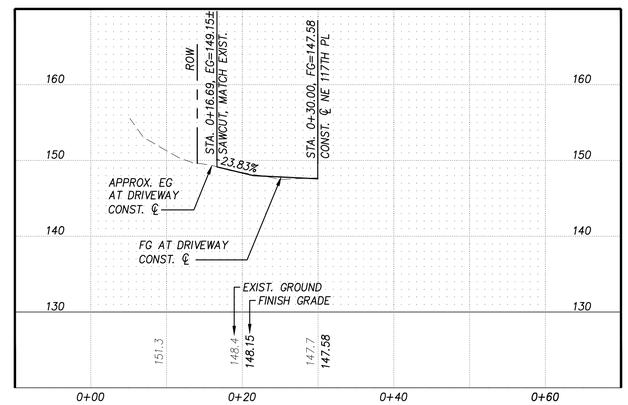


28 C3.02 TYPICAL DRIVEWAY DETAIL



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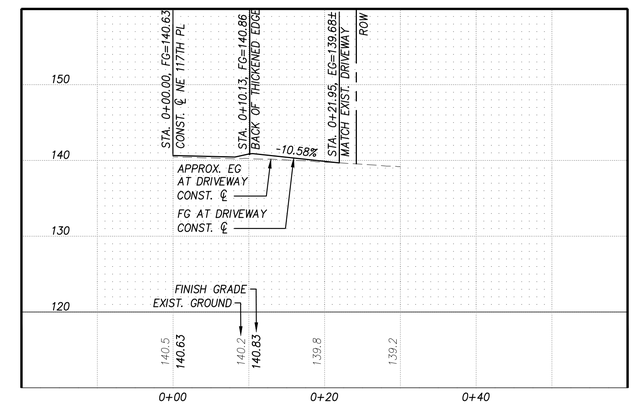
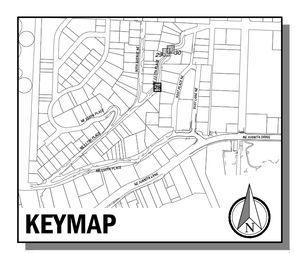


30 C3.03 TYPICAL DRIVEWAY DETAIL



LEGEND

×100.00	EXIST. GRADE ELEVATION
×100.00	FINISHED GRADE ELEVATION
1.0%	EXIST. GRADE SLOPE
1.0%	FINISHED GRADE SLOPE

0 10 20 VERT. IN FEET

0 10 20 HORIZ. IN FEET

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DRIVEWAY PROFILES

C3.40

34 / 51

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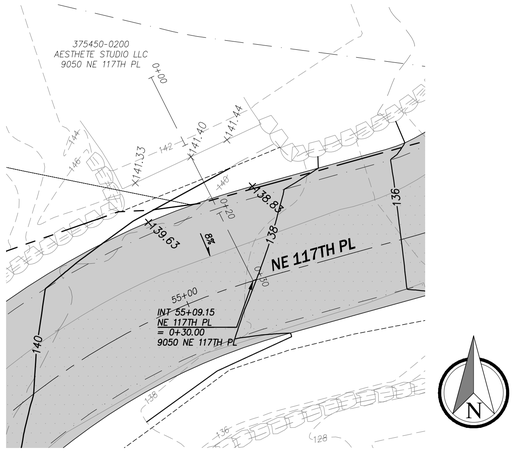
1/5/2024 4:13 PM PETER EVANS



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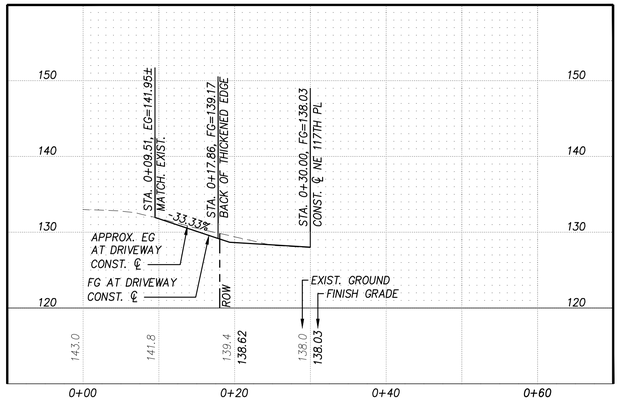
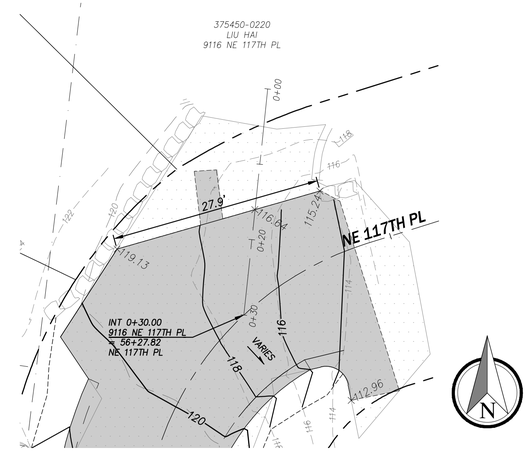


31 C3.03 TYPICAL DRIVEWAY DETAIL



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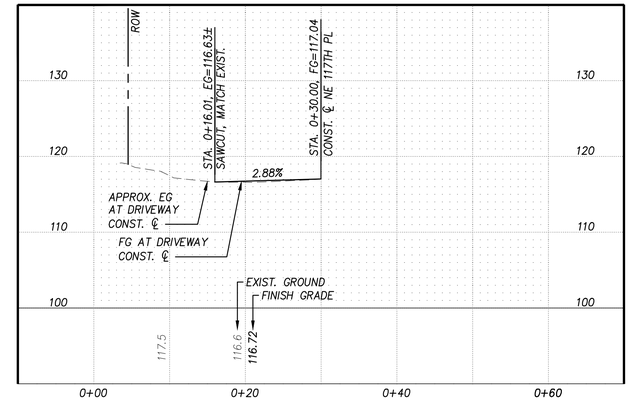
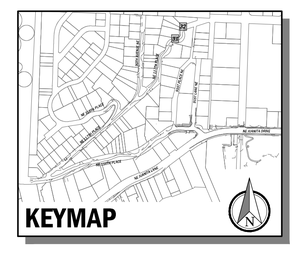


32 C3.03 TYPICAL DRIVEWAY DETAIL



LEGEND

×100.00	EXIST. GRADE ELEVATION
×100.00	FINISHED GRADE ELEVATION
1.0%	EXIST. GRADE SLOPE
1.0%	FINISHED GRADE SLOPE

0 10 20 VERT. IN FEET

0 10 20 HORIZ. IN FEET

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
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DRIVEWAY PROFILES

C3.41

35 / 51

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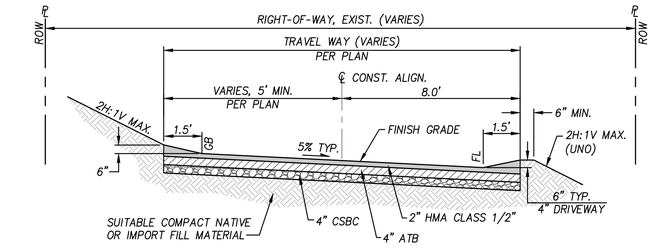
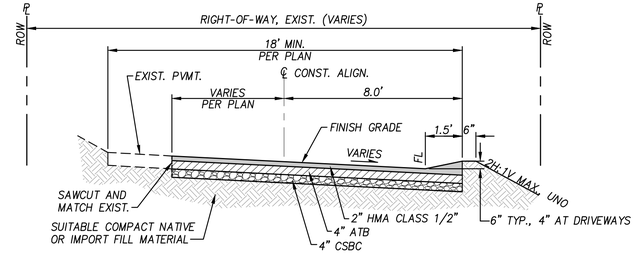
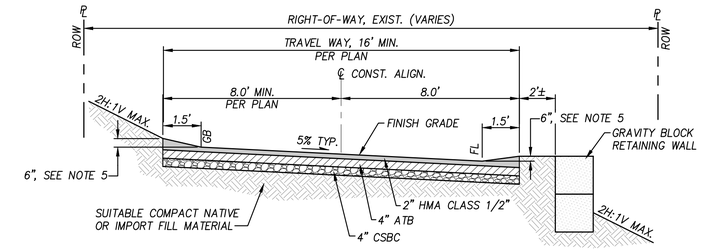


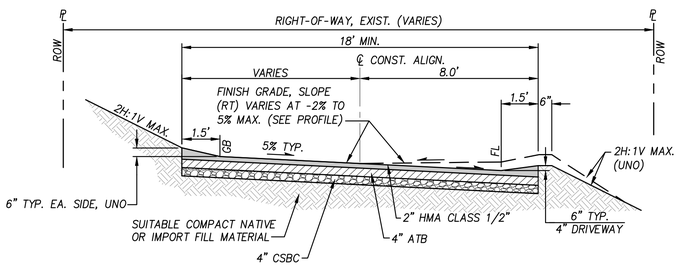
A1 C3.01-10 **TYPICAL ROAD SECTION**
NOT TO SCALE (PUBLIC ROAD)



A3 C3.01-10 **TYPICAL ROAD SECTION - NE 117TH PL**
NOT TO SCALE (PUBLIC ROAD)



A4 C3.04 **TYPICAL ROAD SECTION - 90TH AVE NE**
NOT TO SCALE (PUBLIC ROAD)



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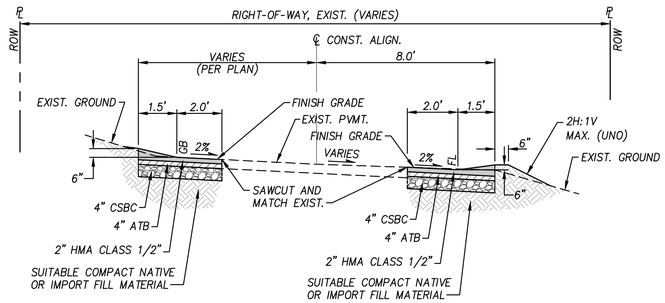

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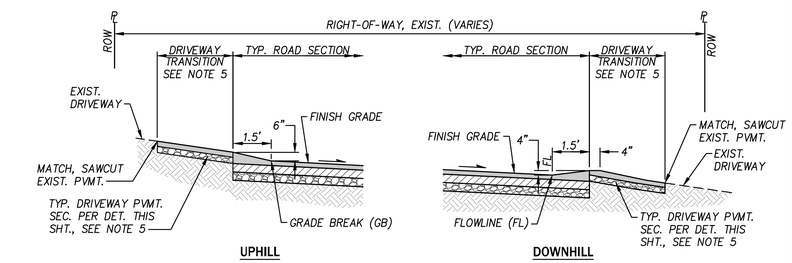
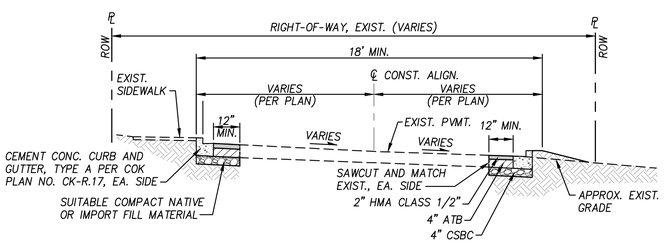
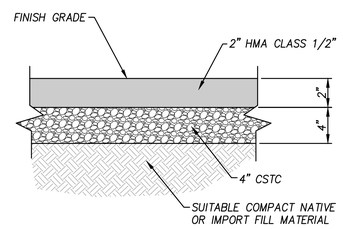


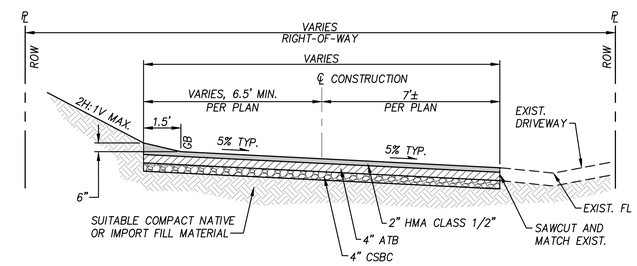
B4 C3.01-10 **TYPICAL DRIVEWAY CONNECTION SECTIONS**
NOT TO SCALE



C C3.11 **TYPICAL ROAD SECTION - 91ST LN NE**
NOT TO SCALE (PUBLIC ROAD)



D – **TYPICAL DRIVEWAY PAVEMENT SECTION**
NOT TO SCALE



B5 C3.01 **ROAD SECTION - NE 117TH PL**
NOT TO SCALE (PUBLIC ROAD)

NOTES:
1. PAVEMENT MATERIAL DEPTHS SHOWN IN THE TYPICAL ROAD SECTIONS REPRESENT COMPACTED VALUES.
2. ALL ASPHALT DEPTHS SPECIFIED TO BE 2 INCHES OR GREATER SHALL BE PLACED IN EQUAL LIFTS OF NO MORE THAN 2 INCHES EACH.
3. ALTERNATE PAVEMENT SECTIONS MAY BE ALLOWED PER GEOTECHNICAL ENGINEER RECOMMENDATIONS AND SUBSEQUENT APPROVAL BY CITY.
4. EXISTING ROAD MATERIALS SHALL BE REMOVED TO SUITABLE SUBGRADE TO COMPLETE ALL TYPICAL ROAD SECTIONS TO THE LIMITS SHOWN ON PLAN.
5. THE TYPICAL DRIVEWAY PAVEMENT SECTION SHALL BE USED FOR ALL EXISTING DRIVEWAYS TO BE REMOVED AND REPLACED AND ALL NEW DRIVEWAY TRANSITIONS UNLESS NOTED OTHERWISE TO BE REPLACED IN-KIND ON THE DRIVEWAY PROFILES (SHEETS C3.31 THRU C3.41).

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

TYPICAL ROADWAY SECTIONS

C3.100

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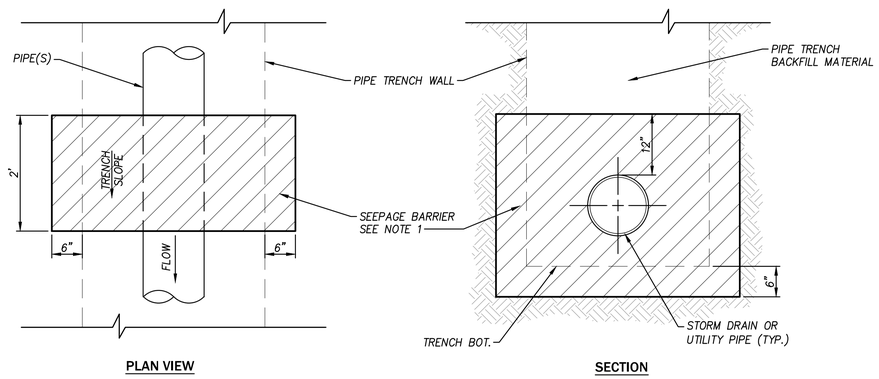
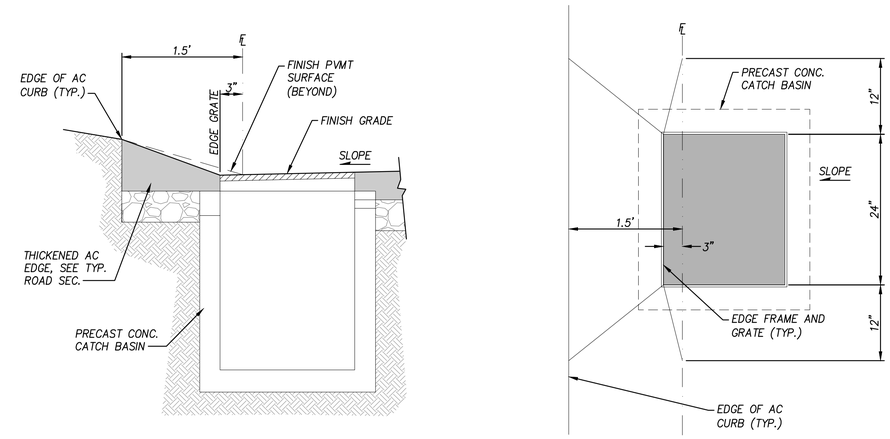


NOTE:
1. SEEPAGE BARRIER MATERIAL SHALL BE CDF UNLESS ALTERNATE IMPERMEABLE MATERIAL IS APPROVED BY ENGINEER.

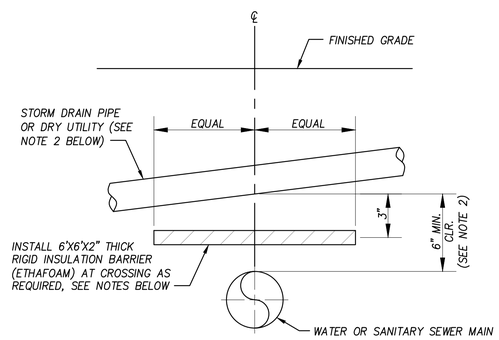
TYPICAL TRENCH SEEPAGE BARRIER

NOT TO SCALE



TYPICAL INLET GRATE PLACEMENT

NOT TO SCALE



NOTES:
1. RIGID INSULATION BARRIER (ETHAFOAM OR APPROVED EQUAL) SHALL BE INSTALLED WITH ALL UTILITY CROSSINGS ABOVE OR BELOW THE EXISTING OR PROPOSED WATER MAIN OR SANITARY SEWER WHERE THE VERTICAL CLEARANCE IS LESS THAN 12 INCHES, THE BARRIER SHALL BE INSTALLED AS SHOWN, WITH ITS EXTENTS CENTERED OVER THE WATER OR SANITARY SEWER MAIN TRANSVERSLY AND LONGITUDINALLY ABOUT THE POINT OF CROSSING OVER THE UTILITY MAIN CENTERLINE
2. PRIMARY POWER LINES SHALL MAINTAIN MINIMUM REQUIRED COVER AND 12" MINIMUM CLEAR BETWEEN UTILITIES.

SHALLOW UTILITY CROSSING

NOT TO SCALE

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

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MATTHEW J. JACKSON, STATE OF WASHINGTON, 36066, REGISTERED PROFESSIONAL ENGINEER
1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

GRADING AND DRAINAGE DETAILS

C3.101

37 / 51

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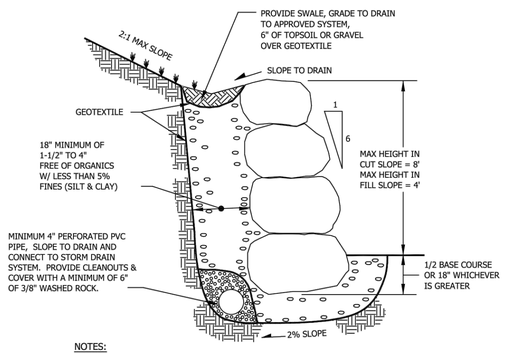
LAST REVISED: 1/18/18



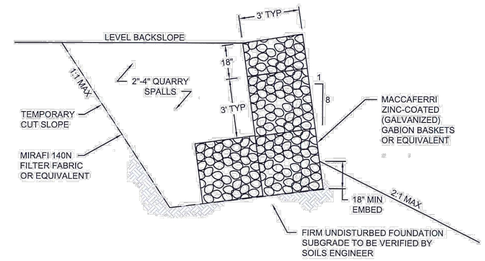
NOTES:

1. CALL FOR CLEAR AND GRADE INSPECTION PRIOR TO BASE COURSE BEING PLACED. VERIFICATION OF ROCKERY HEIGHT, FOUNDATION MATERIAL, AND ROCK SIZE BY CITY CLEAR AND GRADE INSPECTOR IS REQUIRED.
2. 4" TO 6" QUARRY SPALLS SHOULD BE PLACED DIRECTLY FROM TRUCK OR OTHER SUITABLE CONTAINER IN ORDER TO MAINTAIN CLEAN BACKFILL.
3. SPALLS MAY NOT BE NEEDED AT BASE OF ROCKERY IF NATIVE FOUNDATION MATERIAL IS SUITABLE AS DETERMINED BY THE GEOTECHNICAL ENGINEER OR THE CITY CLEARING AND GRADING INSPECTOR.
4. OPENINGS CHINKED WITH QUARRY SPALLS.
5. IF ROCKERY HEIGHT EXCEEDS 4', IT MUST BE DESIGNED BY A PRACTICING GEOTECHNICAL/ CIVIL ENGINEER LICENSED IN THE STATE OF WASHINGTON. NO ROCKERY SHALL BE GREATER THAN 8' IN HEIGHT UNLESS APPROVED BY CITY.
6. A ROCKERY GREATER THAN 4' IN HEIGHT AND ON PRIVATE PROPERTY SHALL REQUIRE A BUILDING PERMIT WITH A THIRD PARTY INSPECTION TO BE CONSTRUCTED.

CITY OF KIRKLAND

PLAN NO. CK- R.52

ROCKERY WALL (RIGHT-OF-WAY AND PRIVATE ACCESS ROAD USE ONLY)



NOTES:
1. GABION BASKET WALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO MANUFACTURER'S SPECIFICATIONS.
2. REFER TO CIVIL DRAWINGS FOR WALL ALIGNMENT AND ELEVATIONS.

associated earth sciences incorporated

GABION WALL DETAIL

GOAT HILL STORM DRAINAGE IMPROVEMENTS
KIRKLAND, WASHINGTON

PROJ NO.	DATE:	FIGURE:
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150574 Goat Hill \150574 Gabion Wall.dwg LAYOUT: F3-150574

TYPICAL GABION WALL

NOT TO SCALE

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MATTHEW J. HOUGH STATE OF WASHINGTON 36495 REGISTERED PROFESSIONAL ENGINEER 1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

GRADING AND DRAINAGE DETAILS

C3.102

38 / 51

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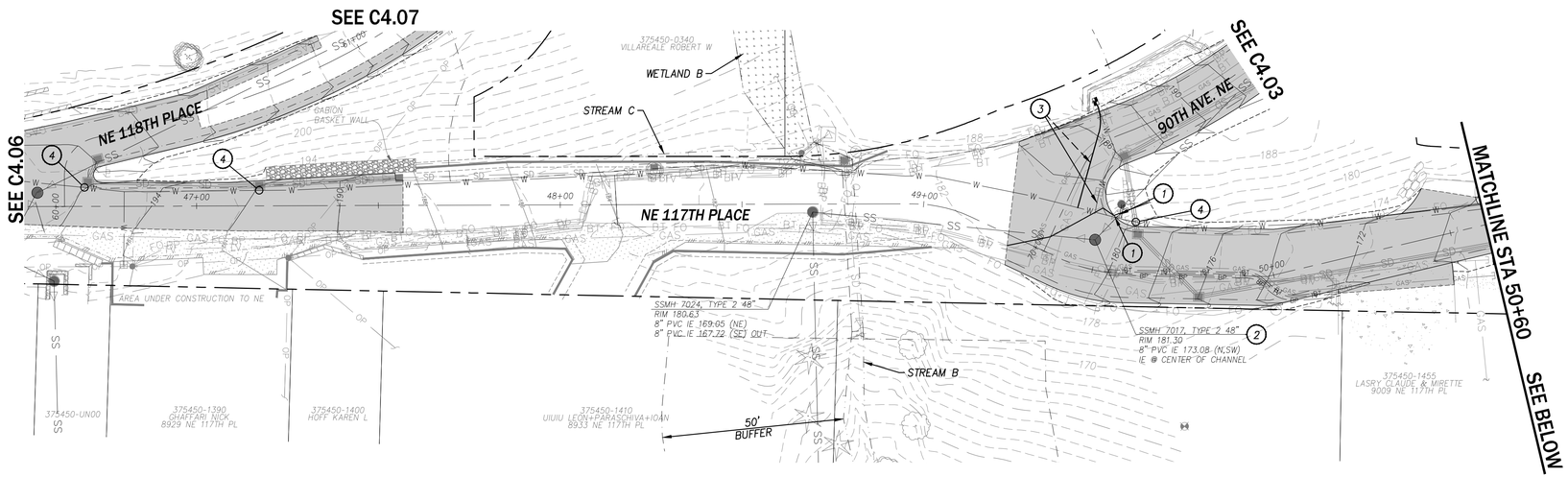

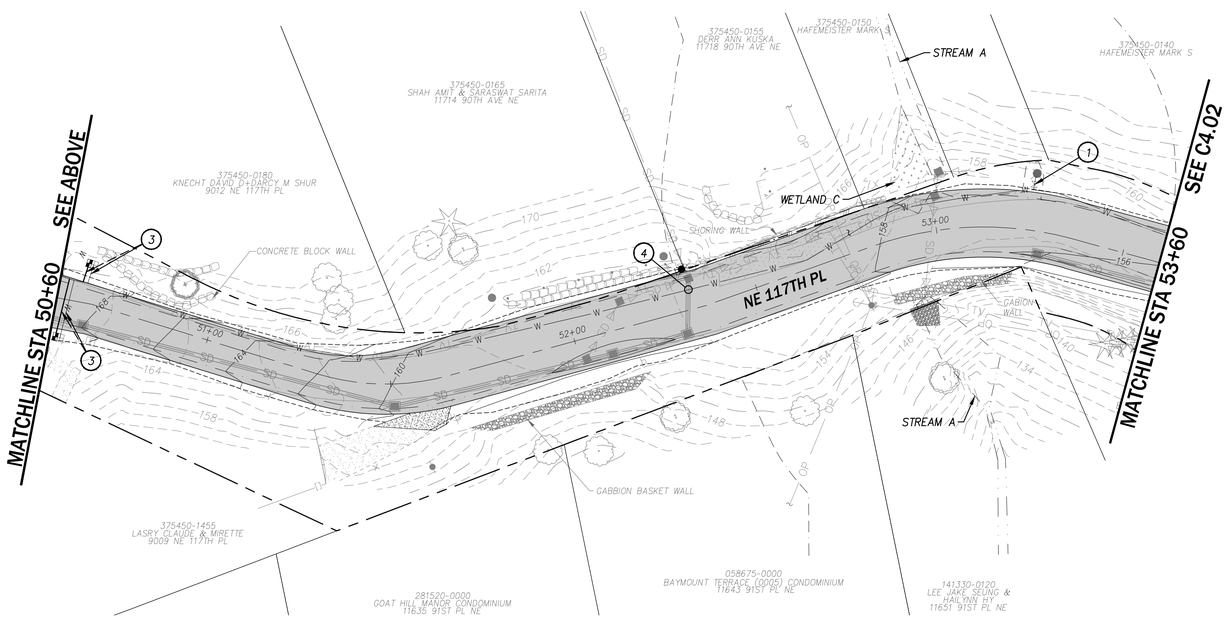

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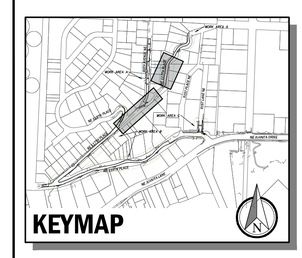

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

NUD WATER AND SEWER PLAN

C4.01

39 / 51

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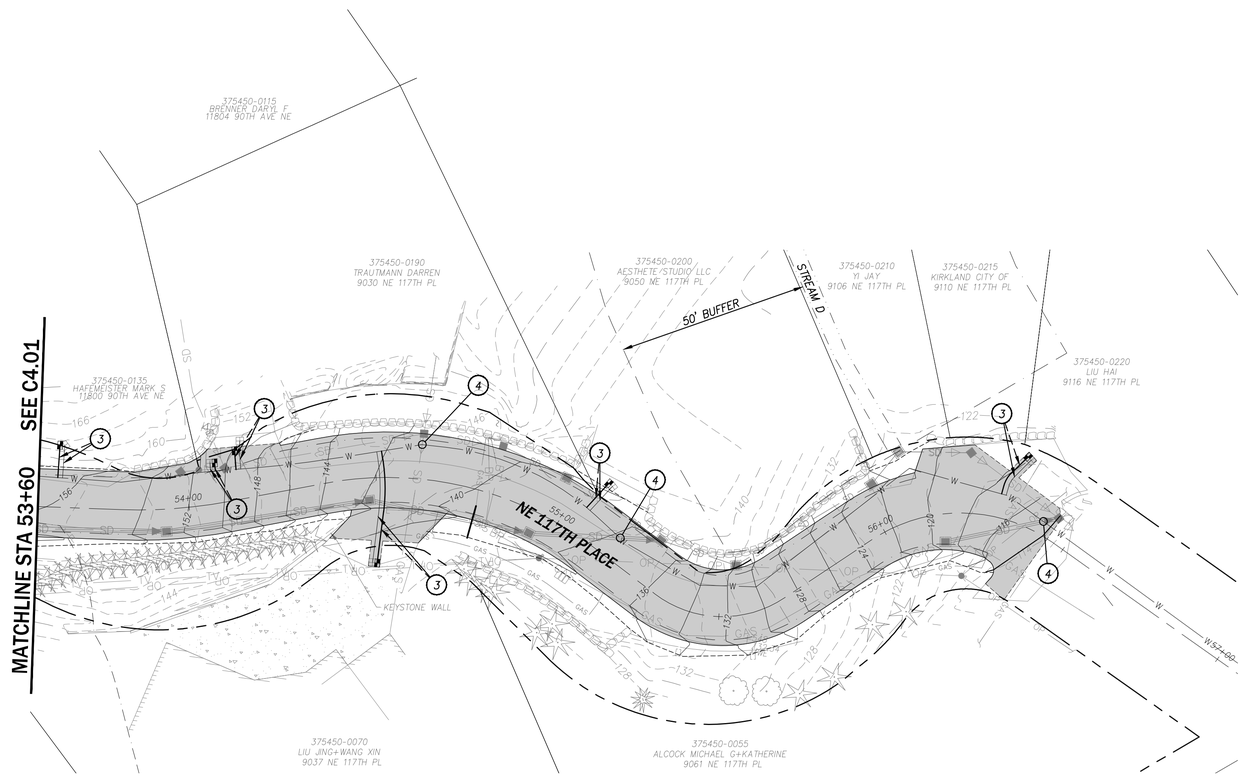

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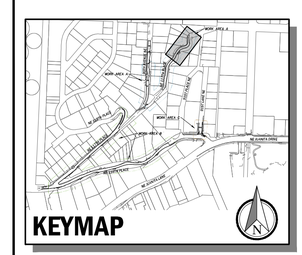

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION - PHASE 1

NUD WATER AND SEWER PLAN

C4.02

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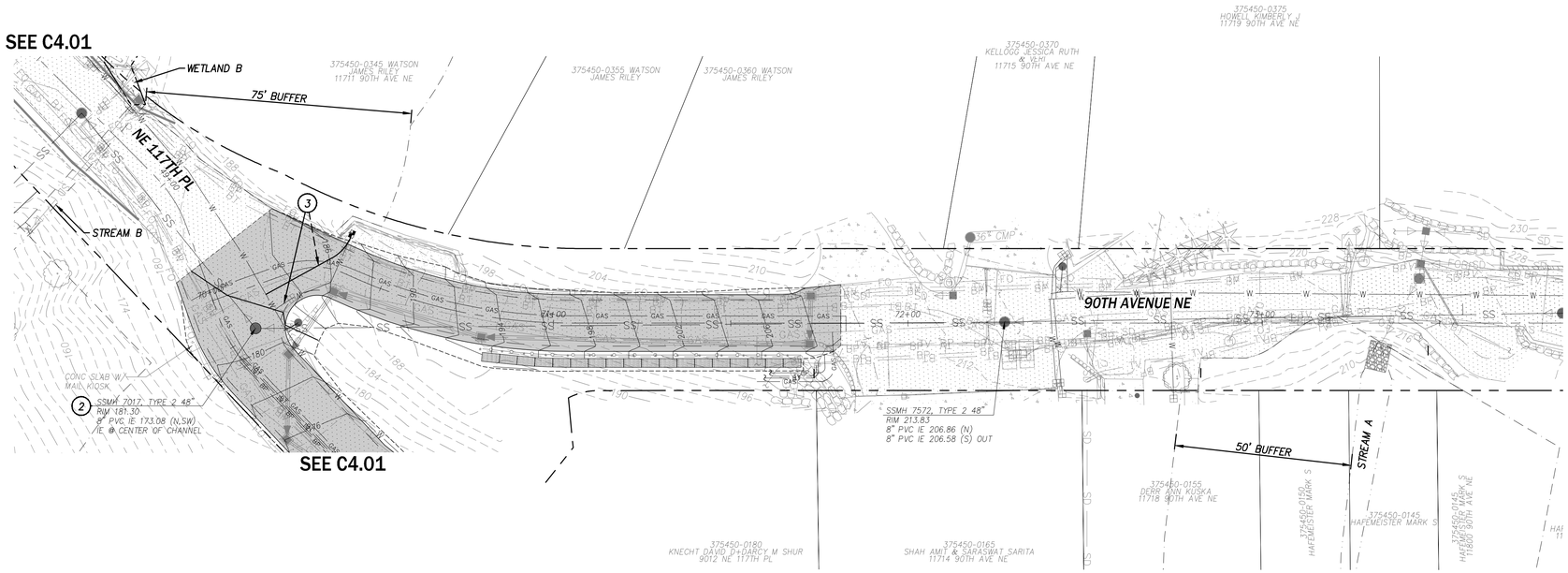

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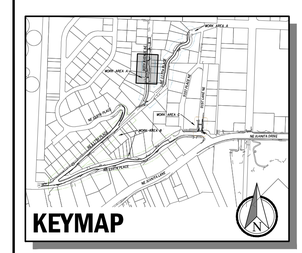

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

NUD WATER AND SEWER PLAN

C4.03

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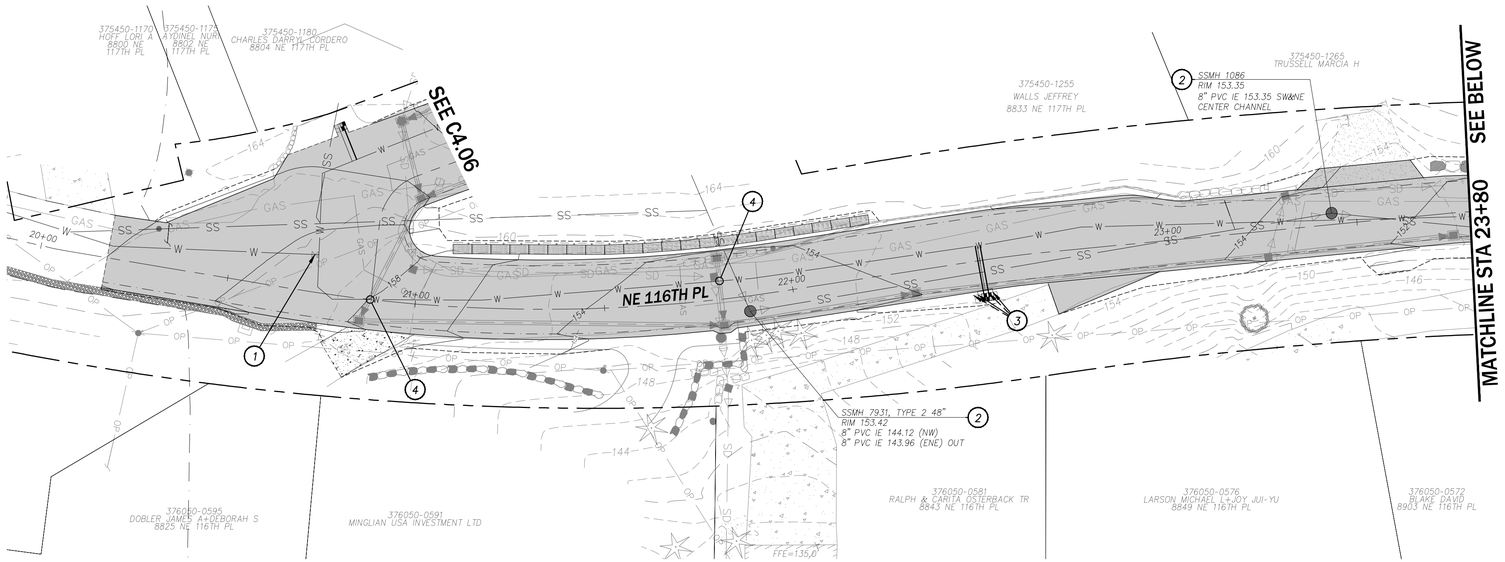

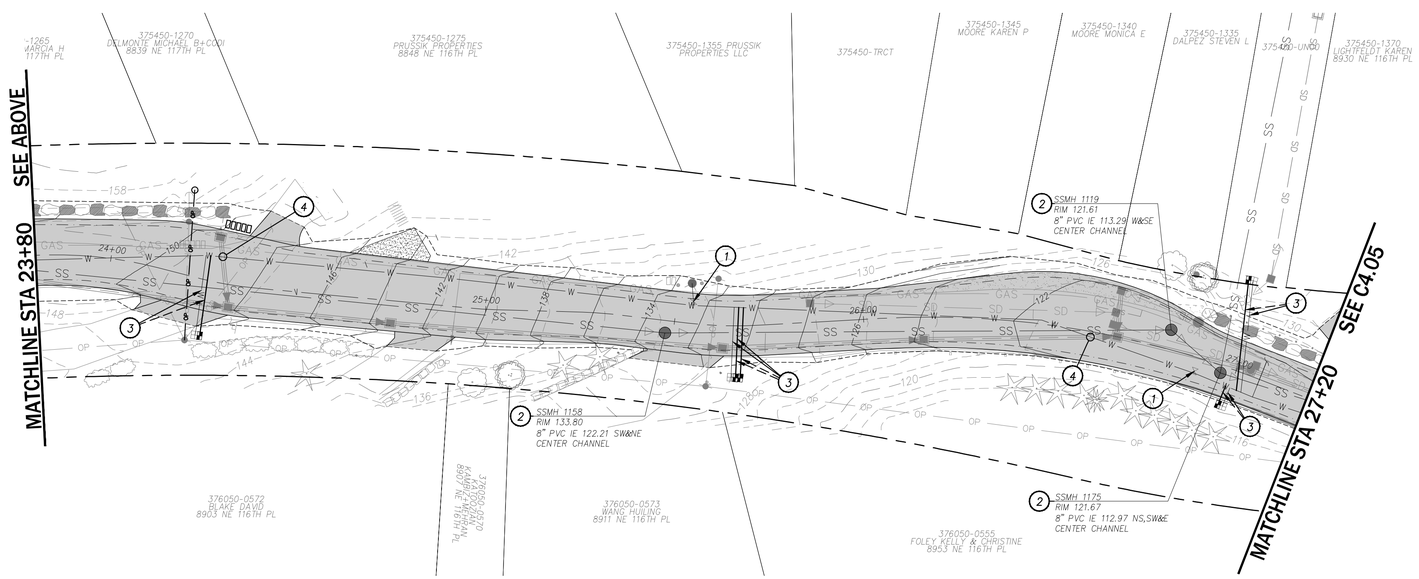

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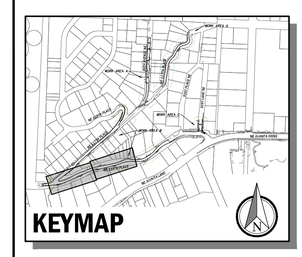

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PLAN IN FEET

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SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
0	BID SET	PCE	MJH	12/27/23

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MATTHEW J. HOWSER, STATE OF WASHINGTON, 40608, REGISTERED PROFESSIONAL ENGINEER, 1/04/2024

CITY OF KIRKLAND WASHINGTON
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PUBLIC WORKS DEPARTMENT
123 FIFTH AVENUE KIRKLAND, WA
KIRKLAND, WA 98033-6189 (206)828-1243
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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

NUD WATER AND SEWER PLAN

C4.04

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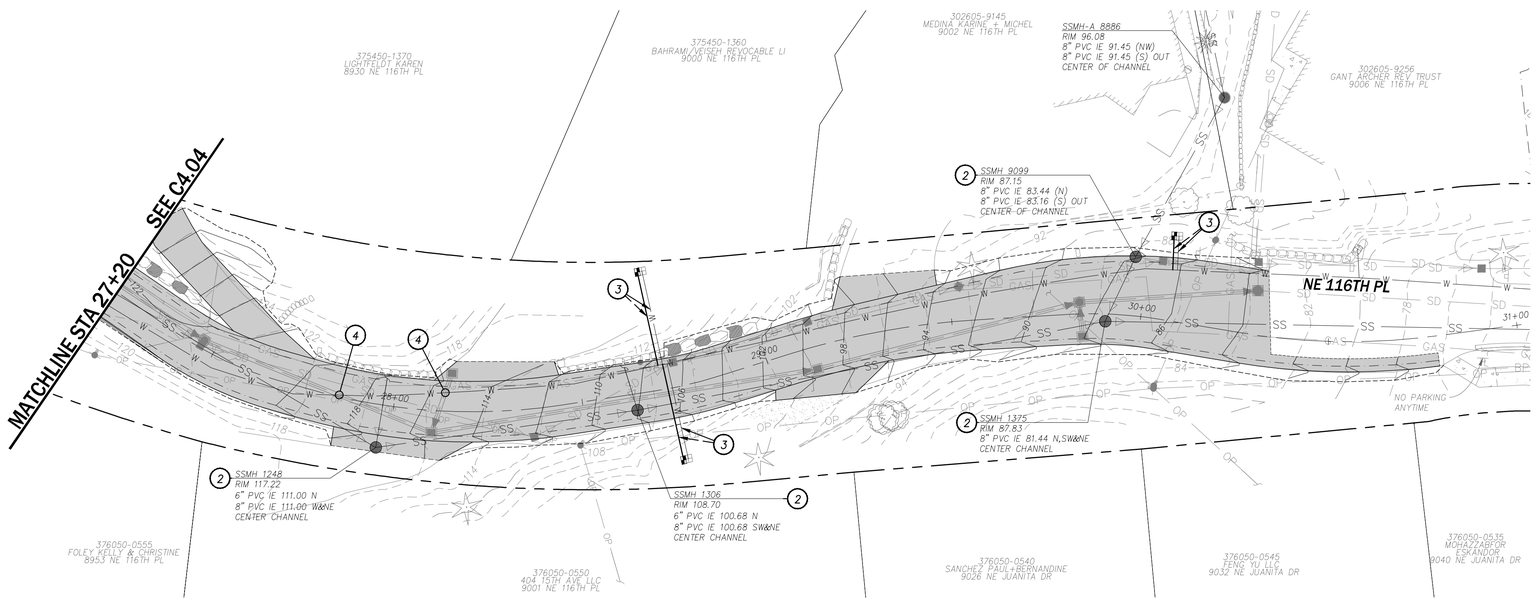

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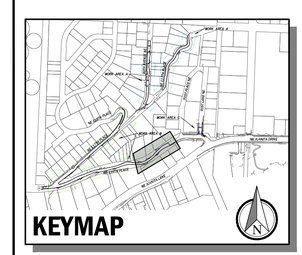

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1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

NUD WATER AND SEWER PLAN

C4.05

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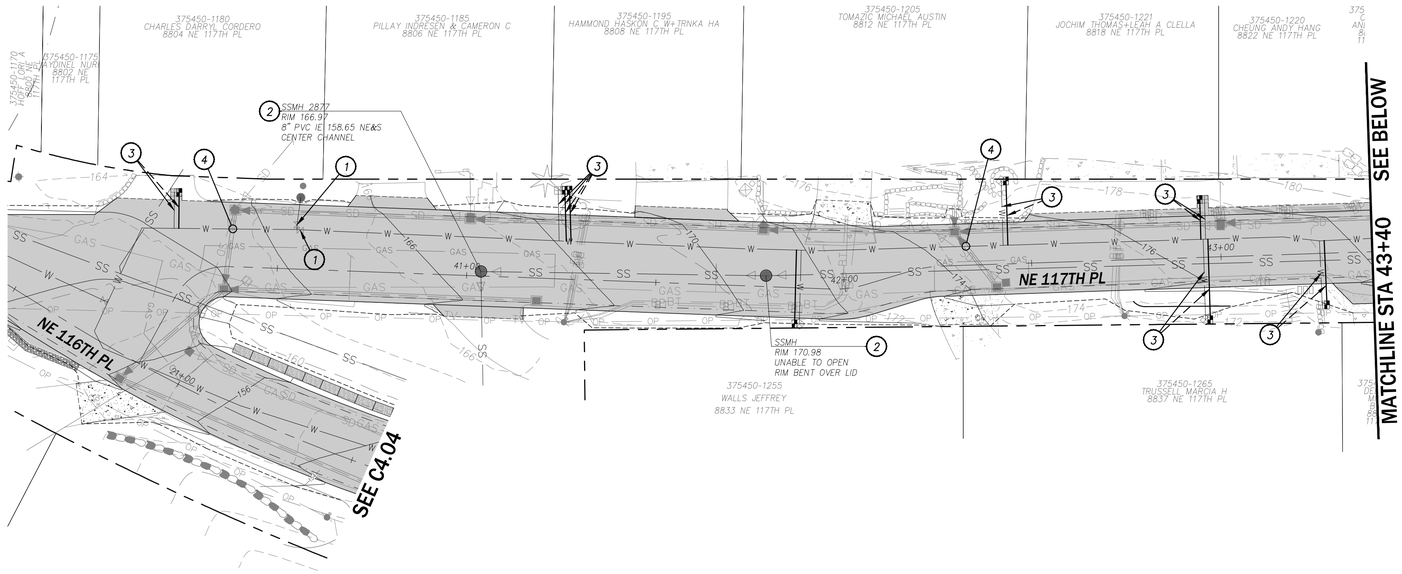

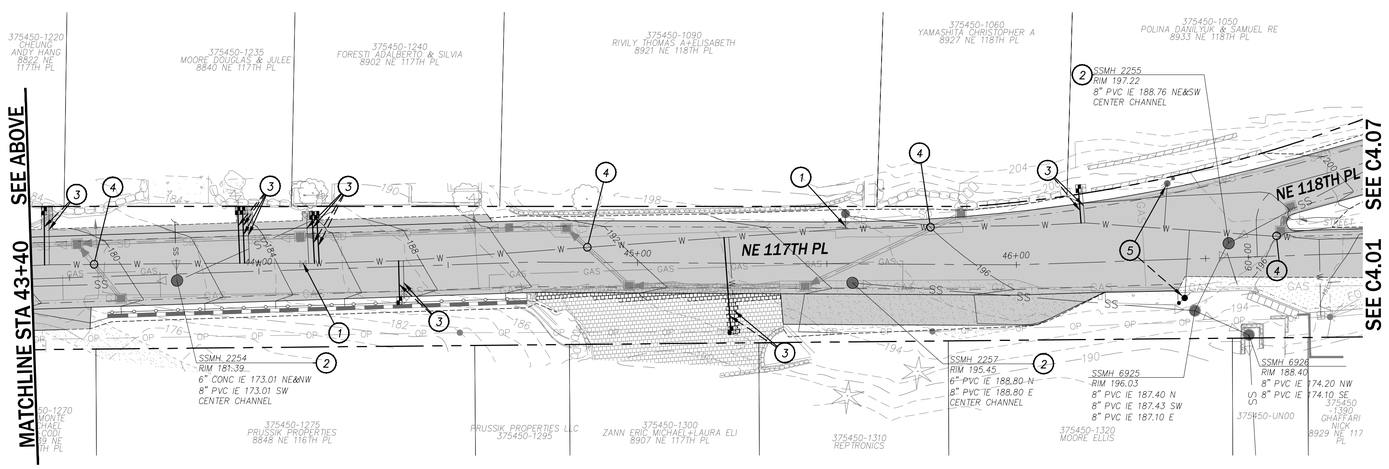

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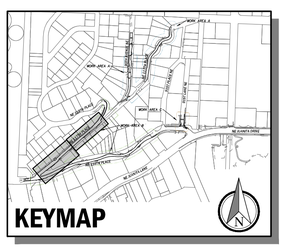

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1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

NUD WATER AND SEWER PLAN

C4.06

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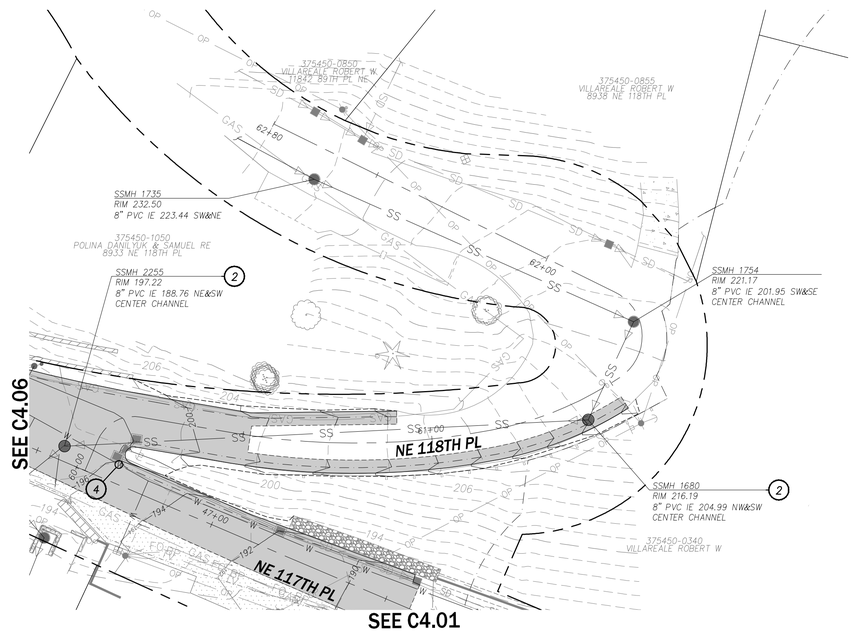

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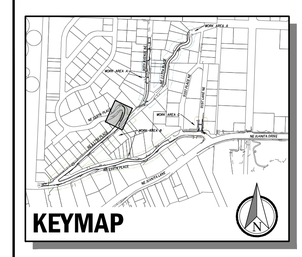

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REGISTERED PROFESSIONAL ENGINEER
1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION - PHASE 1

NUD WATER AND SEWER PLAN

C4.07

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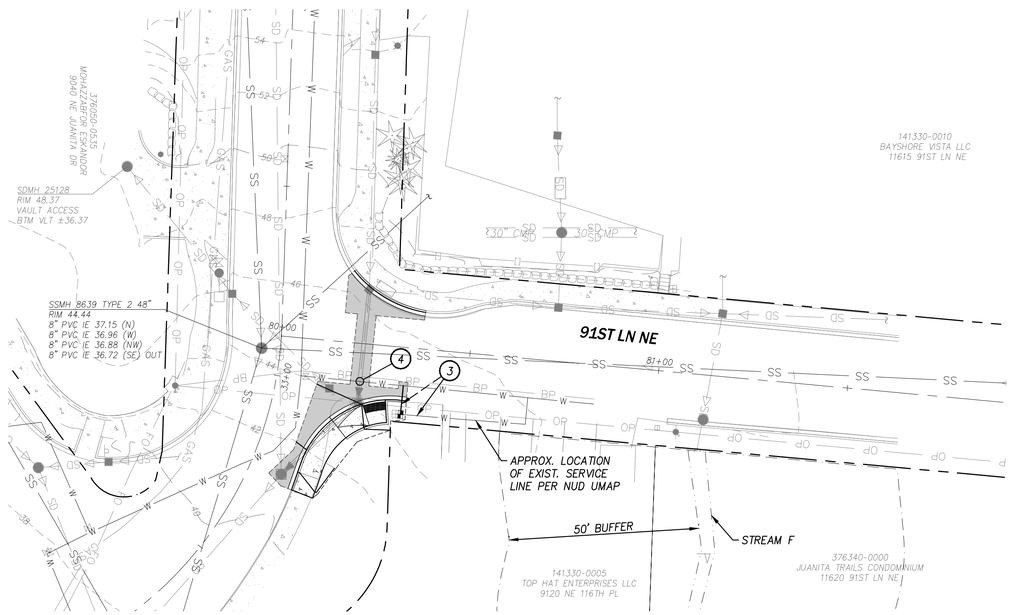

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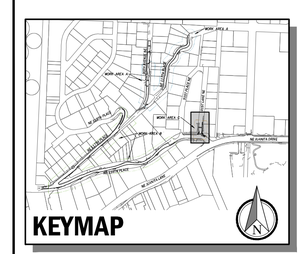

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

NUD WATER AND SEWER PLAN

C4.08

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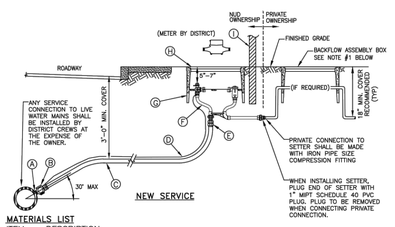


MATERIALS LIST

ITEM	DESCRIPTION
(A)	DIRECT TAP: DIRECT TAP OF DUCTILE IRON OR CAST IRON LARGER THAN 4" DIAMETER IS REQUIRED FOR 1" SERVICES. SADDLES WILL NOT BE ALLOWED ON DUCTILE IRON OR CAST IRON PIPE LARGER THAN 4" DIAMETER. SADDLE: ALL SADDLES SHALL BE DUCTILE IRON CASTING WITH CC THREADS. FOR ALL PIPE MATERIAL OTHER THAN PVC PIPE, SADDLES SHALL BE SINGLE STRAP TYPE EQUAL TO FORD FC101, ROMAC 101NS, MUELLER DR1S, OR DISTRICT APPROVED EQUAL. FOR PVC PIPE, SADDLES SHALL BE DOUBLE STRAP TYPE EQUAL TO MUELLER DR2S, FORD FCD202, OR ROMAC 202NS.
(B)	1" CORPORATION STOP, CC=PACK JOINT, FORD F1001 OR APPROVED EQUAL, WITH STAINLESS STEEL STIFFENER, FORD INSERT-53-72 OR MUELLER 505142. CORPORATION STOP SHALL BE ORIENTED SO THAT THE SHUT OFF IS IN THE 12 O'CLOCK POSITION.
(C)	1 1/4" REHAU MUNICPEX PEXa 3306, COPPER TUBE SIZE (CTS), SDR 9, AWWA C904, PER THE SPECIFICATIONS. PIPE SHALL BE CONTINUOUS FROM CORPORATION STOP TO METER SETTER. ALL PEXa PIPE INSTALLED BY OPEN-CUT CONSTRUCTION SHALL BE BEDDED IN SAND 4" OVER AND UNDER. NATIVE MATERIAL WILL NOT BE ALLOWED FOR BEDDING.
(D)	TRACER WIRE: BLUE 14 GAUGE COPPER, CONTINUOUS, SOLID CORE, POLYETHYLENE INSULATED PER THE SPECIFICATIONS. CONNECTION AT THE METER SETTER SHALL BE MADE WITH AN ALL STAINLESS STEEL HOSE CLAMP. CONNECTION AT THE MAIN LINE WIRE SHALL BE MADE WITH A SPLIT-BOLT CONNECTOR. STRIP COATING PRIOR TO CONNECTION. TRACER WIRE MAY BE REQUIRED FROM SETTER TO HOUSE, CHECK WITH LOCAL JURISDICTION FOR REQUIREMENTS.
(E)	1" ADAPTER, MIP=PACK JOINT, FORD #C86-44-NL WITH STIFFENER, FORD INSERT-55 OR MUELLER 528707.
(F)	1" METER SETTER WITH DUAL CHECK VALVE: FORD VBHC74-84W-11-44A-FP-NL, OR MUELLER 39082588-6403N
(G)	METER BOX: ARMORCAST, A6001946PCX12-NUD (NO "MOUSE HOLES") OR DFW, DFW1324CNP4-12-BODY
(H)	COVER: ARMORCAST, A6001969-H10-NUD OR DFW, DFW1324C-4MT-SMALL-NS-NHK-LID
(I)	2"x4"x4', MARKER POST. PAINTED WHITE WITH "WATER" STENCILED ONTO IT IN BLACK.

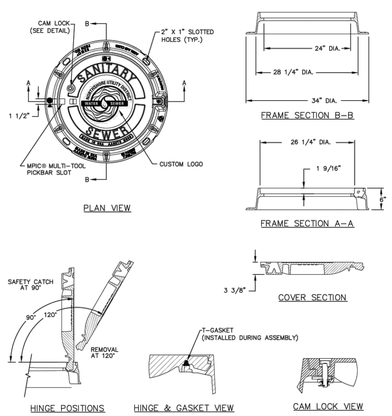
NOTE:

1. IF REQUIRED FOR PREMISE ISOLATION, AN APPROVED BACKFLOW ASSEMBLY SHALL BE INSTALLED IMMEDIATELY BEHIND THE WATER METER PER DISTRICT STANDARD WATER DETAILS #13, #14a, AND #14b .
2. ALL PEXa PIPE TO PACK JOINT CONNECTIONS REQUIRE A STIFFENER INSERT.
3. MULTIPLE ADJACENT DIRECT TAPS ON NEW D MAINS SHALL BE INSTALLED WITH A MINIMUM 18" HORIZONTAL SEPARATION BETWEEN SERVICES AND FROM PIPE BELLS.

1" WATER SERVICE

NOT TO SCALE

DETAIL APPROVALS	NORTHSHORE UTILITY DISTRICT	(4)
EDITOR TMC	2023 STANDARD WATER DETAILS	LAST UPDATED JANUARY 2023
MANAGER SJD		



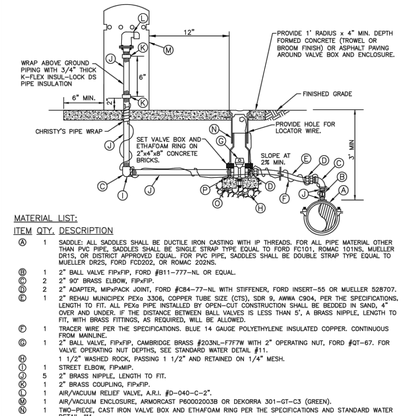
NOTE:

1. MANHOLE FRAME AND COVER SHALL BE EAST JORDAN IRON WORKS ERGO ASSEMBLY, PART NUMBER 001040105L01.
2. FOR PRIVATE MANHOLES, FRAME AND COVER SHALL BE EAST JORDAN IRON WORKS ERGO ASSEMBLY, PART NUMBER 001040043L01. MANHOLE LID TO SAY "SEWER". MANHOLE LID NOT TO INCLUDE NUD LOGO OR NAME.

MANHOLE LOCKING FRAME AND COVER

NOT TO SCALE

DETAIL APPROVALS	NORTHSHORE UTILITY DISTRICT	(5)
EDITOR TMC	2023 STANDARD SEWER DETAILS	LAST UPDATED FEBRUARY 2020
MANAGER SJD		



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(B)	1	2" BALL VALVE FIP=FIP, FORD #B11-777-NL OR EQUAL.
(C)	2	2" 90° BRASS ELBOW, FIP=FIP.
(D)	2	2" ADAPTER, MIP=PACK JOINT, FORD #C84-77-NL WITH STIFFENER, FORD INSERT-55 OR MUELLER 528707.
(E)	1	2" REHAU MUNICPEX PEXa 3306, COPPER TUBE SIZE (CTS), SDR 9, AWWA C904, PER THE SPECIFICATIONS. LENGTH TO FIT. ALL PEXa PIPE INSTALLED BY OPEN-CUT CONSTRUCTION SHALL BE BEDDED IN SAND, 4" OVER AND UNDER. IF THE DISTANCE BETWEEN BALL VALVES IS LESS THAN 5', A BRASS NIPPLE, LENGTH TO FIT, WITH BRASS FITTINGS, AS REQUIRED, WILL BE ALLOWED.
(F)	1	TRACER WIRE PER THE SPECIFICATIONS. BLUE 14 GAUGE POLYETHYLENE INSULATED COPPER. CONTINUOUS FROM MAINLINE.
(G)	1	2" BALL VALVE, FIP=FIP, CAMBRIDGE BRASS #203NL-F777W WITH 2" OPERATING NUT, FORD #QT-67. FOR VALVE OPERATING NUT DEPTHS, SEE STANDARD WATER DETAIL #11.
(H)	1	1 1/2" WASHED ROCK, PASSING 1 1/2" AND RETAINED ON 1/4" MESH.
(I)	1	STREET ELBOW, FIP=MIP.
(J)	5	2" BRASS NIPPLE, LENGTH TO FIT.
(K)	1	2" BRASS COUPLING, FIP=FIP.
(L)	1	AIR/VACUUM RELIEF VALVE, A.R.I. #D-040-C-2".
(M)	1	AIR/VACUUM ENCLOSURE, ARMORCAST P6000200G3B OR DEKORRA 301-GT-C3 (GREEN).
(N)	1	TWO-PIECE, CAST IRON VALVE BOX AND ETHAFOAM RING PER THE SPECIFICATIONS AND STANDARD WATER DETAIL #11.
(O)	2	4"x8"x16" CONCRETE BLOCK.
(P)	2	2"x4"x8" CONCRETE BRICK, ONE ON EITHER SIDE OF THE BALL VALVE TO SUPPORT ETHAFOAM RING.

NOTES:

1. THE LOCATION OF THE ASSEMBLY AS SHOWN ON THE PLANS IS APPROXIMATE ONLY. THE FINAL LOCATION SHALL BE AT THE LOCAL HIGH POINT OF THE WATER MAIN AS DIRECTED BY THE DISTRICT IN THE FIELD DURING CONSTRUCTION.
2. 2" BALL VALVE SHALL BE INSTALLED PER THE DIRECTIONAL ARROW STAMPED ON VALVE BODY. THE DRAIN PORT IS TO DISCHARGE INTO THE WASHED ROCK.
3. ALL PEXa PIPE TO PACK JOINT CONNECTIONS REQUIRE A PIPE STIFFENER.
4. FOR SHALLOW INSTALLS AS DETERMINED BY THE DISTRICT, PROVIDE 3" WIDE, BLUE METALLIC WATER DETECTOR TAPE 6"-12" ABOVE PIPE, FROM MAIN TO VALVE BOX.

2" AIR & VACUUM RELIEF VALVE ASSEMBLY

NOT TO SCALE

DETAIL APPROVALS	NORTHSHORE UTILITY DISTRICT	(8)
EDITOR TMC	2023 STANDARD WATER DETAILS	LAST UPDATED JANUARY 2023
MANAGER SJD		

NOTES:

1. WATER SERVICE PER NUD STANDARD WATER DETAILS, #4 OR #5.
2. NEW METER TO BE RELOCATED TO LOCATION SHOWN ON PLANS.
3. MEASURE AND RECORD EXISTING WATER PRESSURE AT BUILDING PRIOR TO RECONNECTION AND AFTER REESTABLISHMENT OF SERVICE. IF PRESSURE READINGS DIFFER BY MORE THAN 5 PSI, THE CONTRACTOR SHALL LOCATE AND CORRECT THE ISSUE AT THE PRIVATE PRV. IF A PRIVATE PRV IS REMOVED DURING NEW SERVICE INSTALLATION, ADD A NEW PRV DIRECTLY BEHIND METER BOX.
4. ALL PIPE FITTINGS SHALL BE BRASS. PRIOR TO MAKING THE CONNECTION, THE CONTRACTOR SHALL POTHOLE THE EXISTING SERVICE LINE TO DETERMINE THE LOCATION, SIZE, AND TYPE OF EXISTING PIPE AND TO CONFIRM THE PIPE AND FITTINGS REQUIRED TO MAKE THE CONNECTION. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED PIPE AND FITTINGS ON-SITE PRIOR TO DISRUPTING WATER SERVICE AND COMMENCING CONSTRUCTION. NO EXISTING WATER SERVICE SHALL BE DISRUPTED FOR MORE THAN TWO HOURS IN ONE DAY.
5. ALL PEXa PIPE TO PACK JOINT CONNECTIONS REQUIRE A STIFFENER INSERT.
6. FLUSH ALL NEW WATER SERVICE PIPING IN THE PRESENCE OF THE DISTRICT.
7. COORDINATE WITH THE DISTRICT TO SALVAGE THE EXISTING METER AND FOR INSTALLATION OF THE METER INTO THE NEW SERVICE SETTER. LOCATE AND RECONNECT THE EXISTING SERVICE LINE ON THE BACK OF THE METER. ALL PRIVATE AND PRIVATE WATER SERVICE CONNECTIONS SHALL BE TESTED AT LINE PRESSURE AND SHALL BE VISUALLY INSPECTED BY THE DISTRICT.
8. REMOVE AND REPLACE EXISTING METER BOX AND SETTER.
9. RESTORE THE SITE TO A CONDITION EQUAL TO OR BETTER THAN EXISTED PRIOR TO CONSTRUCTION.

EXISTING WATER SERVICE RE-CONNECTION

NOT TO SCALE

DETAIL APPROVALS	NORTHSHORE UTILITY DISTRICT	(9)
EDITOR TMC	2023 STANDARD WATER DETAILS	LAST UPDATED FEBRUARY 2022
MANAGER SJD		

VALVE BOX NOTES:

1. CAST-IRON VALVE BOX AND COVER SHALL BE EAST JORDAN IRON WORKS: VALVE BOX COVER 08060203X, VALVE BOX TOP 8555701261, AND VALVE BOX BOTTOM 8555603SU. FOR SHALLOW OR DEEP INSTALLS, VALVE BOX TOP SHALL BE DETERMINED BY THE DISTRICT.
2. IF VALVE BOX IS IN AN UNPAVED AREA, PROVIDE 1' RADIUS x 4" MINIMUM DEPTH CONCRETE OR ASPHALT PAVING AROUND VALVE BOX. CONCRETE SHALL HAVE A BROOM/TROWEL FINISH.
3. INSTALL ETHAFOAM RING BETWEEN BASE OF VALVE BOX AND GATE VALVES OR ON CONCRETE BRICKS FOR BALL VALVES. ETHAFOAM RING TO BE 2" IN THICKNESS.

VALVE OPERATING NUT EXTENSION NOTES:

1. VALVE OPERATING NUT EXTENSIONS ARE REQUIRED WHEN VALVE NUT IS MORE THAN 5' BELOW FINISHED GRADE.
2. LENGTH AS REQUIRED TO PUT OPERATING NUT TWO (2) FEET FROM FINISHED GRADE.
3. EXTENSIONS TO BE A MINIMUM OF TWO (2) FEET LONG.
4. ONE (1) EXTENSION PER VALVE.
5. NO ADJUSTABLE VALVE EXTENSIONS ALLOWED.
6. WHEN AN EXTENSION IS REQUIRED, USE A 50LS PIPE BETWEEN VALVE BOX TOP AND VALVE BOX BOTTOM. LENGTH TO FIT.

VALVE BOX & OPERATING NUT EXTENSION

NOT TO SCALE

DETAIL APPROVALS	NORTHSHORE UTILITY DISTRICT	(11)
EDITOR TMC	2023 STANDARD WATER DETAILS	LAST UPDATED FEBRUARY 2022
MANAGER SJD		

Goat Hill Improvements Project, Ph 1

Water Services to be Replaced

No.	Plan Sheet	Ex. Mtr, inches	Service Address	Svc Type	NUD Acct #	Meter Number	Meter Install Date	Owner Name	Location Notes
1	C4.01	0.75	11711 90th Ave NE	Poly	251256	43579814	10/19/2011	Watson James Riley	5' LEFT OF HYD ON CORNER
2	C4.01	1	9012 NE 117th Pl	Poly	289452	43523692	10/20/2011	Shurin-Knecht Darcy	RIGHT OF DRIVE IN BANK
3	C4.01	0.75	9009 NE 117th Pl	Poly	278280	43579818	10/17/2011	Lasry Claude & Mirette	LEFT SIDE OF PROP
4	C4.02	0.75	11800 90th Ave NE	Poly	151704	43580472	10/16/2011	Hafemeister Mark S	RT PROP
5	C4.02	1	11804 90th Ave nE	PEXa	292072	43523824	10/16/2011	Brenner Daryl F	ON 117TH PL
6	C4.02	1	9030 NE 117th Pl Kirkland	Poly	329472	210898289	5/3/2022	Darren Trautmann	LT PROP
7	C4.02	0.75	9037 NE 117th Pl Kirkland	Poly	300238	43579817	10/18/2011	Jing Liu	LT PROP LINE
8	C4.02	0.75	9050 NE 117th Pl Kirkland	Poly	151712			Aesthete Studio	MTR Pulled 3/27/19, Hold mtr set until temp mtr returned
9	C4.02	1	9116 NE 117th Pl Kirkland	Poly	324200	47910324	12/29/2015	Liu Hai	IN DRIVEWAY
10	C4.04	0.75	8843 NE 116th Pl	Poly	248948	43579810	10/18/2011	Ralph Osterback	BETWEEN ROAD AND DRIVEWAY
11	C4.04	1	8851 NE 116th Pl	Poly	151605	44540471	1/22/2013	Larson / Jui-Yu Lin	
12	C4.04	0.75	8903 NE 116th Pl	Plastic	249631	43579812	10/20/2011	David Blake	2' LEFT TEL POLE
13	C4.04	0.75	8907 NE 116th Pl	UNK	276856	43579632	10/20/2011	Kambiz Katoozian	2' LT OF PP FRNT OF 8911 NE 116 PL
14	C4.04	0.75	8911 NE 116th Pl	Poly	273528	43579633	10/19/2011	Zhijun Wu Huiling Wang	
15	C4.04	0.75	8930 NE 116th Pl	Poly	241323	43579837	10/17/2011	Karen Lightfeldt	50' UP DR ON LT 10' BH ADDRESS POST
16	C4.04	1	8953 NE 116th Pl	Poly	151589	43579634	10/19/2011	Foley Christine	IN LINE W/DOOR
17	C4.05	0.75	9000 NE 116th Pl	Poly	151563	43579834	10/17/2011	Bahram/Veiseh Revocable Living Trust	ON BANK IN IVY 60' RIGHT OF DRIVE APX 5' FROM RD
18	C4.05	1	9001 NE 116th Pl	Poly	151517	43580314	10/19/2011	404 15th Ave LLC	IN DR NEAR PIPE HANDRAIL
19	C4.05	1	9002 NE 116th Pl	UNK	242321	43523913	10/17/2011	Nirupama Chandrasekaran	10' LEFT P POLE
20	C4.06	1	8804 NE 117th Pl	Poly	321408	44540601	11/21/2013	Charles Darryl Cordero	IN DR
21	C4.06	1	8806 NE 117th Pl	UNK	321168	44540488	8/2/2013	Indresen Pillay & Claire Cameron	RT PROP
22	C4.06	0.75	8808 NE 117th Pl	UNK	283464	43579793	10/17/2011	Hammond Marilyn	15' LEFT OF DRIVE
23	C4.06	1	8833 NE 117th Pl	UNK	330688	50216283	10/21/2019	Jeffrey D Walls	15' RT OF FRONT DOOR
24	C4.06	1	8812 NE 117th Pl	UNK	291712	43523713	10/18/2011	Michael Tomazic	RIGHT PROP LINE 15' FROM ROAD
25	C4.06	1	8818 NE 117th Pl	Poly	320168	44178949	11/26/2012	Revell Sally	RT PROP
26	C4.06	0.75	8837 NE 117th Pl	Poly	151639	43579835	10/16/2011	Trussell Marcia H	15' RT MAILBOX
27	C4.06	0.75	8839 NE 117th Pl	UNK	280088	43579820	10/16/2011	Codi Walker Michael Delmonte &	RIGHT PROP AND 6' OFF ROAD
28	C4.06	1	8822 NE 117th Pl	Poly	320160	44178948	11/26/2012	Lam Andy Cheung & Yu	RT PROP
29	C4.06	1	8840 NE 117th Pl (Fire Flow)	Poly	310177-F	43523712	10/17/2011	Moore Douglas and Julee	FIRE MTR RT SIDE OF BLDG
30	C4.06	0.75	8840 NE 117th Pl (Domestic)	Poly	310176	43579791	10/17/2011	Moore Douglas and Julee	Domestic RT SIDE OF BLDG
31	C4.06	1	8902 NE 117th Pl (Fire Flow)	Poly	310289-F	43523855	10/17/2011	Gayeon Kim Adalberto Foresti &	FIRE MTR LT OF DR
32	C4.06	0.75	8902 NE 117th Pl (Domestic)	Poly	310288	43579649	10/17/2011	Gayeon Kim Adalberto Foresti &	Domestic MTR LT OF DR
33	C4.06	0.75	8848 NE 116th Pl	Poly	151647	43579833	10/16/2011	Prussik Properties	IN LINE & 10'RT P POLE
34	C4.06	1	8933 NE 118th Pl	Poly	293744	43523854	10/17/2011	Reineman Polina Danilyuk & Samuel Thomas	SW CORNER OF PROP ON 117 ST
35	C4.06	1	8907 NE 117th Pl	Poly	296488	43523776	10/17/2011	Michael Eric Zann & Laura Eli	LT OF DRIVEWAY
36	C4.08	1	9120 NE 116th Pl		223446	43523893	10/12/2011	Top Hat Enterprises LLC	RT SIDE OF BLDG 5' FRM PAVEMENT

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
0	BID SET	PCE	MJH	12/27/23

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MATTHEW J. MICHEL, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER — 1/04/2024

CITY OF KIRKLAND WASHINGTON

CITY OF KIRKLAND
PUBLIC WORKS DEPARTMENT
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KIRKLAND, WA 98033-6189 (206)828-1243
(206)828-1243

GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION - PHASE 1

NUD WATER AND SEWER DETAILS

C4.100

47 / 51

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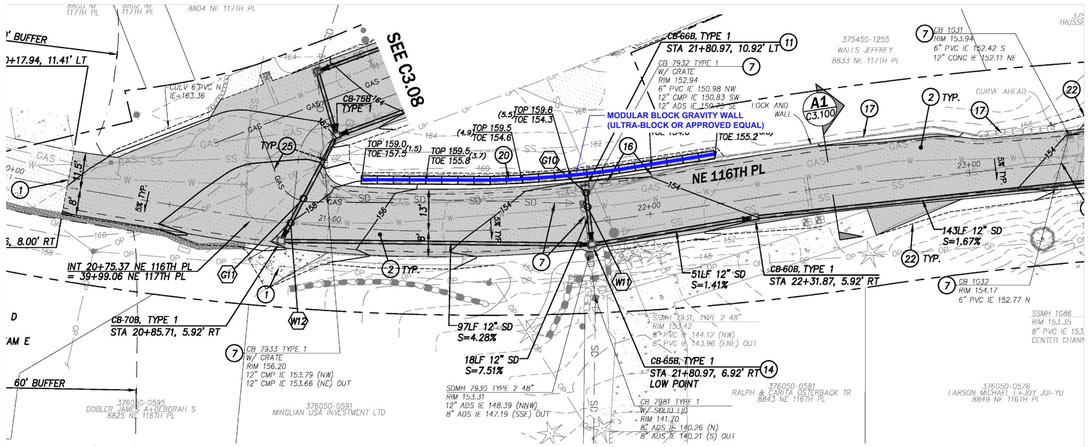


SITE PLAN

REFERENCE: CPH CONSULTANTS, GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION PHASE 1, SHEET C3.05, 9/29/23.

NOTES:

1. DESIGN OF THE BLOCK RETAINING WALL IS BASED ON THE FOLLOWING:
   - INTERNAL ANGLE OF FRICTION FOR RETAINED SOIL = 32 DEGREES
   - UNIT WEIGHT OF SOIL = 120 POUNDS PER CUBIC FOOT (PCF)
   - MAXIMUM WALL HEIGHT = 5 FEET
   - BATTER OF WALL = VERTICAL
   - BACKSLOPE = 2H:1V MAXIMUM
   - EMBEDMENT DEPTH = 1-FOOT MINIMUM
   - SEISMIC SURCHARGE = 0.295G

2. OBSERVATION OF SUBGRADE, ROCK BEARING PAD, PLACEMENT OF DRAIN PIPE, GRAVEL, AND FINISHED BLOCKS BY GEOTECHNICAL ENGINEER IS REQUIRED.

3. WALL ELEVATIONS AND LAYOUT ARE TO BE PER CIVIL DRAWINGS.

4. CONTRACTOR TO VERIFY ALL LOCATIONS, ELEVATIONS, DIMENSIONS AND SETBACKS.

GENERAL NOTES:

WALL UNITS

1. WALL UNITS ARE TO BE FULL BLOCKS, FULL FLAT BLOCKS, HALF BLOCKS, HALF FLAT BLOCKS, AND FLAT CAPS AS MANUFACTURED BY ULTRA-BLOCK, INC., OR ENGINEER APPROVED EQUAL.

DRAINAGE AGGREGATE

1. DRAINAGE LAYER MATERIALS FOR WALL DRAIN SHALL BE WASHED CRUSHED ROCK MATERIAL MEETING WSDOT STANDARD SPECIFICATION 9-03.9(2) FOR PERMEABLE BALLAST OR APPROVED EQUAL.

WALL BACKFILL

1. VOIDS BETWEEN THE BACK OF WALL AND TEMPORARY CUT SLOPE SHOULD BE BACKFILLED WITH CRUSHED ROCK AGGREGATE (WSDOT CRUSHED SURFACING BASE COURSE OR APPROVED EQUAL) AND COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557).

BEARING PAD CONSTRUCTION

1. BEARING PAD SHALL BE PLACED AS SHOWN ON THE CONSTRUCTION DETAILS WITH A MINIMUM THICKNESS OF 6 INCHES.

2. FOUNDATION SOIL SHALL EITHER BE FIRM AND UNYIELDING NATIVE SOIL OR CRUSHED ROCK AGGREGATE PLACED AND COMPACTED TO AT LEAST 95 PERCENT OF MODIFIED PROCTOR DENSITY.

3. SOIL BEARING PAD MATERIAL SHALL BE COMPACTED TO PROVIDE A HARD SURFACE ON WHICH TO PLACE THE FIRST COURSE OF UNITS. COMPACTION WILL BE WITH MECHANICAL PLATE COMPACTORS TO A FIRM AND UNYIELDING CONDITION AS DETERMINED BY THE GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE.

4. BEARING PAD SHALL BE PREPARED TO ALLOW INTIMATE CONTACT OF BLOCKS WITH PAD.

BLOCK UNIT INSTALLATION

1. FIRST COURSE OF BLOCKS SHALL BE PLACED ON THE BEARING PAD. THE UNITS SHALL BE CHECKED FOR BATTER AND ALIGNMENT. THE FIRST COURSE IS THE MOST IMPORTANT TO ENSURE ACCURATE AND ACCEPTABLE RESULTS.

2. ENSURE THAT UNITS ARE IN FULL CONTACT WITH BASE.

3. UNITS ARE PLACED SIDE BY SIDE FOR FULL LENGTH OF STRAIGHT WALL ALIGNMENT. ALIGNMENT MAY BE DONE BY MEANS OF A STRING LINE OR OFFSET FROM BASE LINE TO A MOLDED FINISHED FACE OF THE UNIT. ADJUST UNIT SPACING FOR CURVED SECTIONS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

4. PLACE AND COMPACT FILL BEHIND UNITS.

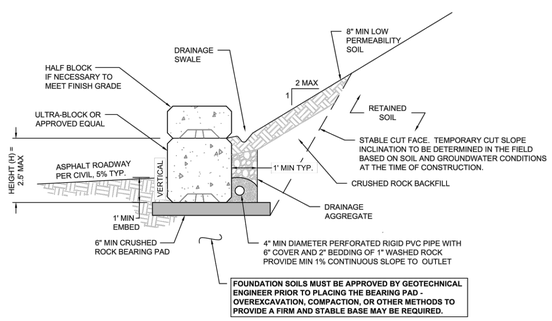
5. CLEAN ALL EXCESS DEBRIS FROM TOP OF UNITS AND INSTALL NEXT COURSE.

6. LAY EACH SUCCESSIVE COURSE SO THAT SHEAR CONNECTORS ARE ENGAGED. STAGGER EACH LAYER OF BLOCKS BY HALF BLOCK LENGTH.

7. REPEAT PROCEDURES TO THE EXTENT OF THE WALL HEIGHT.

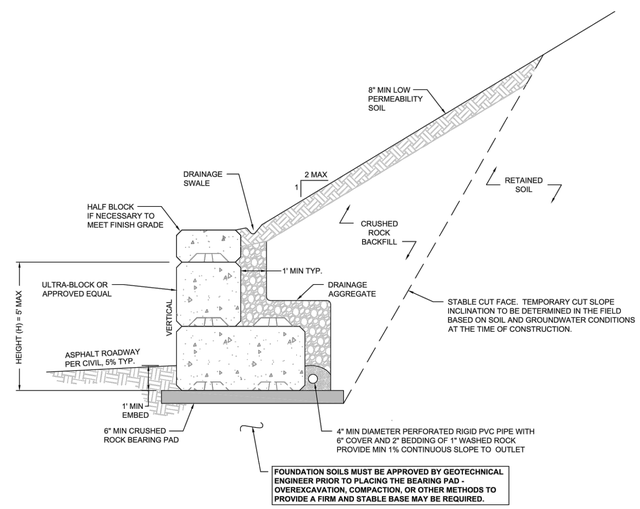
INSPECTIONS

1. INSPECTION OF THE WALL BASE, BLOCK PLACEMENT, DRAIN, AND BACKFILL BY THE GEOTECHNICAL ENGINEER IS REQUIRED.



TYPICAL 2.5' WALL SECTION (1 BLOCK STACK)

NO SCALE



TYPICAL 5' WALL SECTION (2 BLOCK STACK)

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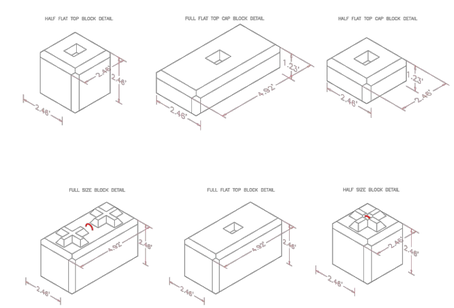

ULTRA-BLOCK MANUFACTURER'S DETAILS

NO SCALE - DIMENSIONS AND KEY PATTERN MAY VARY SLIGHTLY BLOCK TO BLOCK

20220263 Goat Hill Walls UB.dwg LAYOUT: E002-FW1 116th Pl

associated earth sciences incorporated
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BRADFORD DREW
STATE OF WASHINGTON
57948
REGISTERED PROFESSIONAL ENGINEER

GOAT HILL DRAINAGE IMPROVEMENTS PHASE 1
NE 116TH PLACE
KIRKLAND, WASHINGTON

DRAWN BY:	CNT
CHECKED BY:	BD
DATE	10/23
PROJECT NO.	20220263E002
FIGURE	W1

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

NO.	REVISION	BY	REVIEW	DATE
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MATTHEW J. HOBSON
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REGISTERED PROFESSIONAL ENGINEER
1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

RETAINING WALL PLANS AND DETAILS

C6.00

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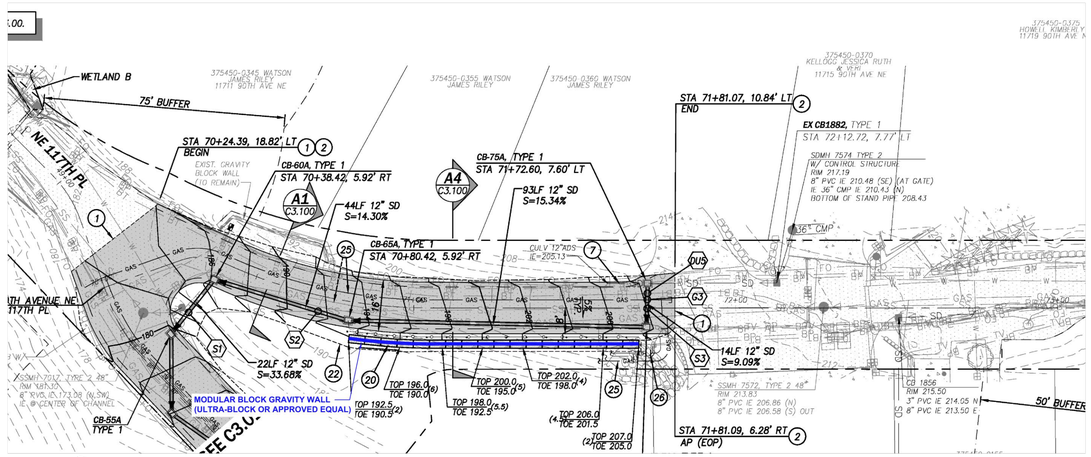

SITE PLAN

REFERENCE: CPH CONSULTANTS, GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION PHASE 1, SHEET C3.04, 9/29/23.

NOTES:

1. DESIGN OF THE BLOCK RETAINING WALL IS BASED ON THE FOLLOWING:
   - INTERNAL ANGLE OF FRICTION FOR RETAINED SOIL = 40 DEGREES
   - UNIT WEIGHT OF SOIL = 135 POUNDS PER CUBIC FOOT (PCF)
   - MAXIMUM WALL HEIGHT = 10 FEET (5' EXPOSED HEIGHT)
   - BATTER OF WALL = VERTICAL
   - BACKSLOPE = 4 PERCENT
   - EMBEDMENT DEPTH = AS SHOWN
   - TRAFFIC SURCHARGE = 250 PSF
   - SEISMIC SURCHARGE = 0.295G

2. OBSERVATION OF SUBGRADE, ROCK BEARING PAD, PLACEMENT OF DRAIN PIPE, GRAVEL, AND FINISHED BLOCKS BY GEOTECHNICAL ENGINEER IS REQUIRED.

3. WALL ELEVATIONS AND LAYOUT ARE TO BE PER CIVIL DRAWINGS.

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GENERAL NOTES:

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WALL BACKFILL

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BEARING PAD CONSTRUCTION

1. BEARING PAD SHALL BE PLACED AS SHOWN ON THE CONSTRUCTION DETAILS WITH A MINIMUM THICKNESS OF 6 INCHES.

2. FOUNDATION SOIL SHALL CONSIST OF UNDISTURBED GLACIALLY CONSOLIDATED SOIL.

3. SOIL BEARING PAD MATERIAL SHALL BE COMPACTED TO PROVIDE A HARD SURFACE ON WHICH TO PLACE THE FIRST COURSE OF UNITS. COMPACTION WILL BE WITH MECHANICAL PLATE COMPACTORS TO A FIRM AND UNYIELDING CONDITION AS DETERMINED BY THE GEOTECHNICAL ENGINEER OR THEIR REPRESENTATIVE.

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3. UNITS ARE PLACED SIDE BY SIDE FOR FULL LENGTH OF STRAIGHT WALL ALIGNMENT. ALIGNMENT MAY BE DONE BY MEANS OF A STRING LINE OR OFFSET FROM BASE LINE TO A MOLDED FINISHED FACE OF THE UNIT. ADJUST UNIT SPACING FOR CURVED SECTIONS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

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5. CLEAN ALL EXCESS DEBRIS FROM TOP OF UNITS AND INSTALL NEXT COURSE.

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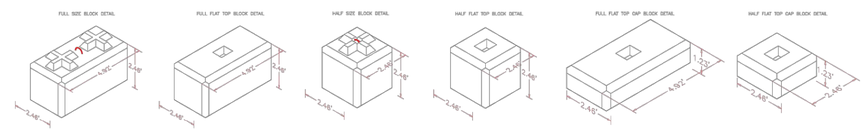
7. REPEAT PROCEDURES TO THE EXTENT OF THE WALL HEIGHT.

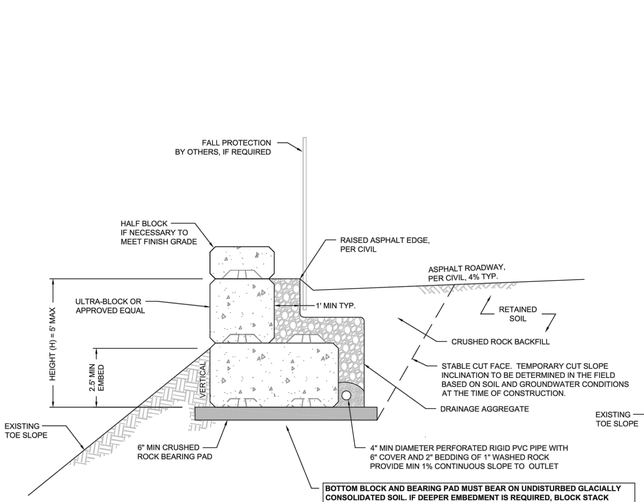
INSPECTIONS

1. INSPECTION OF THE WALL BASE, BLOCK PLACEMENT, DRAIN, AND BACKFILL BY THE GEOTECHNICAL ENGINEER IS REQUIRED.

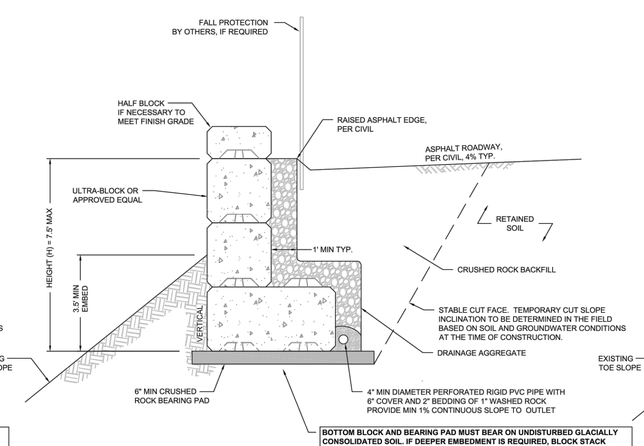
ULTRA-BLOCK MANUFACTURER'S DETAILS

NO SCALE - DIMENSIONS AND KEY PATTERN MAY VARY SLIGHTLY BLOCK TO BLOCK

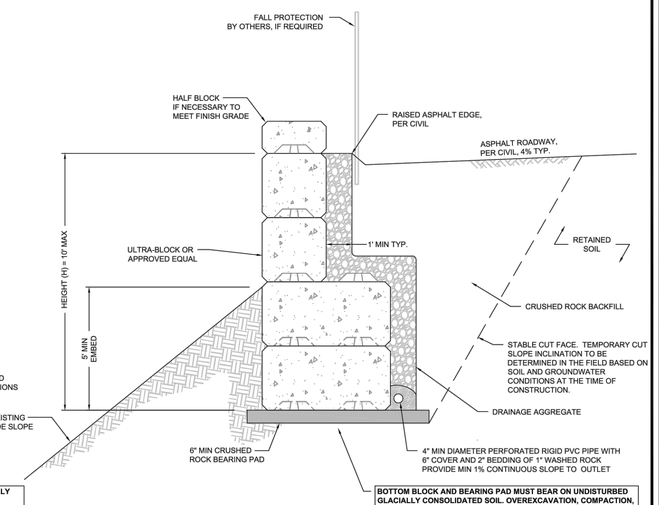




TYPICAL 5' WALL SECTION
(MAXIMUM EXPOSED HEIGHT = 2.5')
NO SCALE



TYPICAL 7.5' WALL SECTION
(MAXIMUM EXPOSED HEIGHT = 4')
NO SCALE



TYPICAL 10' WALL SECTION
(MAXIMUM EXPOSED HEIGHT = 5')
NO SCALE

20220263 Goat Hill Walls UB.dwg LAYOUT: E002 FW2 90th

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GOAT HILL DRAINAGE IMPROVEMENTS PHASE 1
90TH AVE NE
KIRKLAND, WASHINGTON

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CHECKED BY:	BD
DATE	10/23
PROJECT NO.	20220263E002
FIGURE	W2

CIP NO.	JOB NO.	ENGR.	REVIEW	SCALE	DATE
SDC0900000	19-23-PW	MJH	MJH	AS NOTED	1/04/2024

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

RETAINING WALL PLANS AND DETAILS

C6.01

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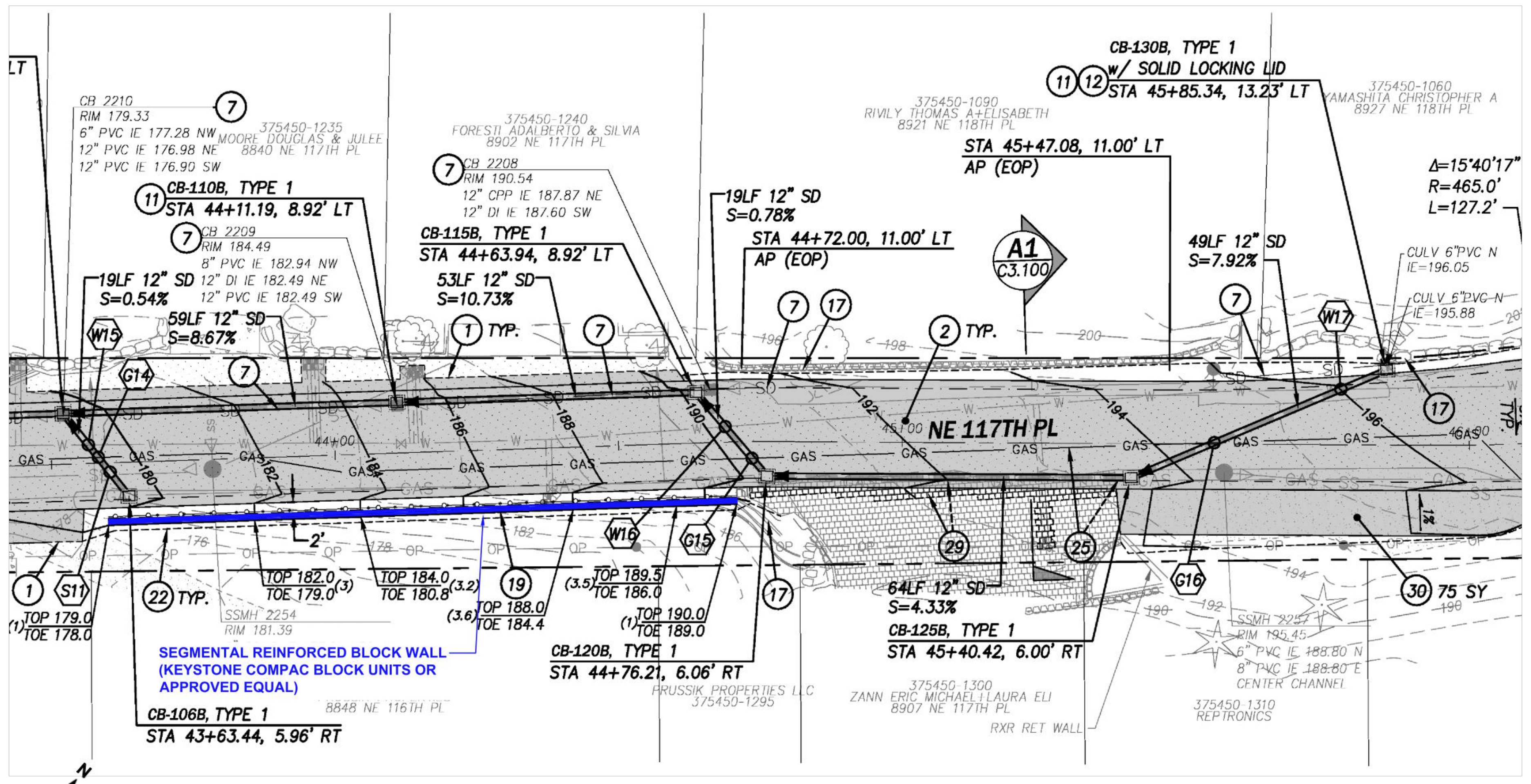
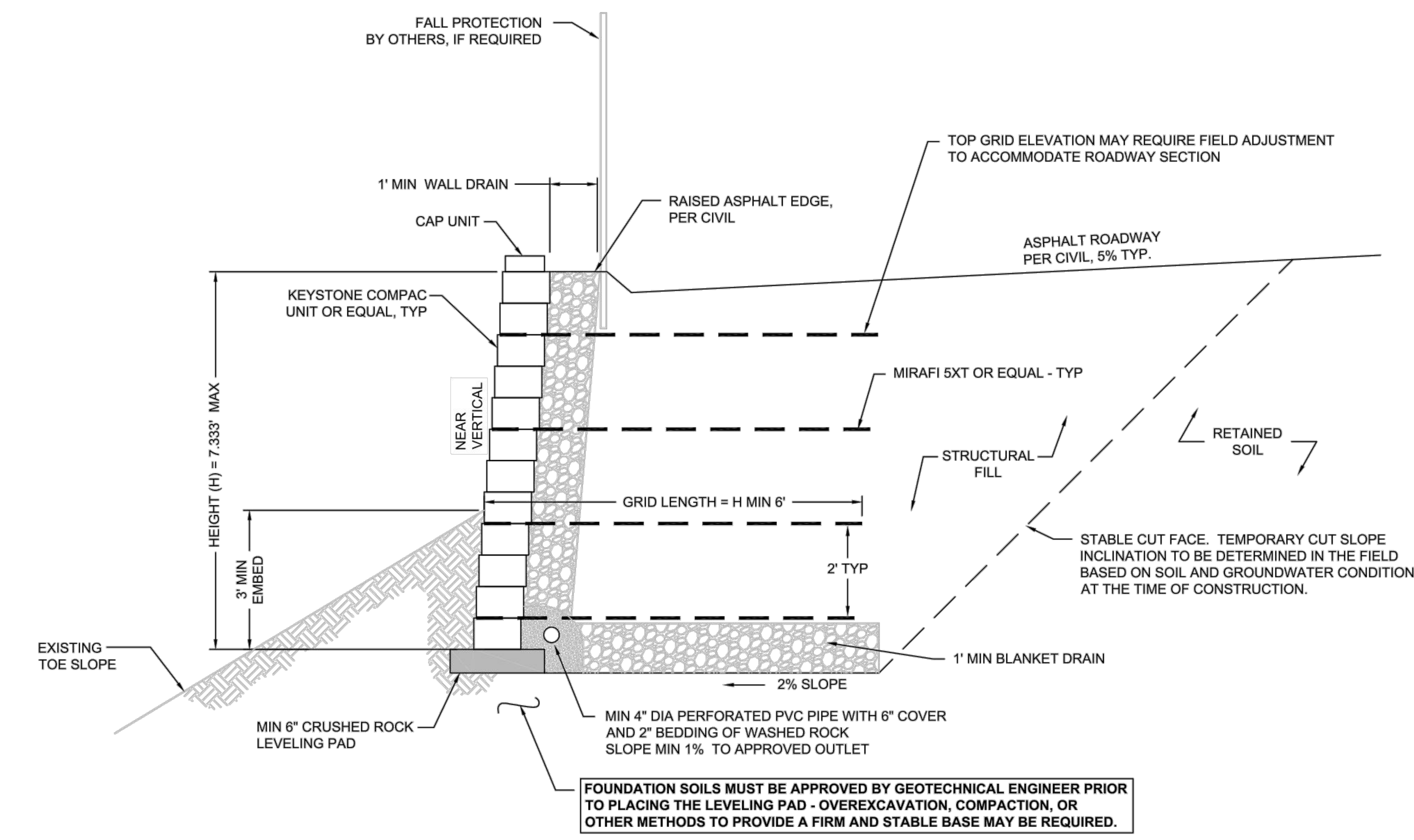


SITE PLAN

REFERENCE: CPH CONSULTANTS, GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION PHASE 1, SHEET C3.09, 9/29/23.



TYPICAL SEGMENTAL REINFORCED BLOCK WALL SECTION (KEYSTONE COMPAC BLOCK UNIT OR APPROVED EQUAL)

NO SCALE

NOTES:

1. DESIGN OF THE SEGMENTAL RETAINING WALL IS BASED THE FOLLOWING DESIGN VALUES:
   INTERNAL ANGLE OF FRICTION FOR REINFORCED SOIL = 36 DEGREES
   UNIT WEIGHT OF REINFORCED SOIL = 125 LB/CU FT
   INTERNAL ANGLE OF FRICTION FOR RETAINED SOIL = 28 DEGREES
   UNIT WEIGHT OF RETAINED SOIL = 115 LB/CU FT
   TRAFFIC SURCHARGE = 250 PSF
   SEISMIC SURCHARGE = 0.295G
   MAXIMUM WALL HEIGHT = AS SHOWN
   BATTER OF WALL = NEAR VERTICAL
   EMBEDMENT = 3 FEET MIN
2. CONTRACTOR TO VERIFY ALL LOCATIONS, ELEVATIONS, AND DIMENSIONS.
3. FOR BIDDING PURPOSES, THE DESIGN WALL HEIGHT SHALL INCLUDE BOTH THE ABOVE GRADE DIMENSIONS SHOWN ON THE CIVIL PLANS AND THE BELOW GRADE EMBEDDED PORTION OF THE WALLS INDICATED HEREIN.

GENERAL NOTES:

SEGMENTAL RETAINING WALL (SRW) UNITS

1. SRW UNITS SHALL BE MACHINE-FORMED CONCRETE BLOCKS SPECIFICALLY DESIGNED FOR RETAINING WALL APPLICATIONS.
2. SRW UNITS SHALL MEET THE FOLLOWING STRUCTURAL REQUIREMENTS:
   A. CONCRETE USED TO MANUFACTURE SRW UNITS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI IN ACCORDANCE WITH ASTM C90. THE CONCRETE SHALL HAVE ADEQUATE FREEZE/THAW PROTECTION WITH A MAXIMUM MOISTURE ABSORPTION RATE, BY WEIGHT OF 6%.
   B. UNITS SHALL BE POSITIVELY INTERLOCKED TO PROVIDE A MINIMUM SHEAR CAPACITY OF 1500 PLF AT 2 PSI NORMAL PRESSURE.
   C. UNITS SHALL PROVIDE A MINIMUM CONNECTION STRENGTH BETWEEN IT AND THE GEOSYNTHETIC REINFORCEMENT OF 1000 PLF AT 2 PSI NORMAL FORCE.
   D. SRW UNITS MOLDED DIMENSIONS SHALL NOT DIFFER MORE THAN ± 1/8 INCH FROM THAT SPECIFIED, EXCEPT HEIGHT WHICH SHALL BE ± 1/16 INCH.
3. SRW UNITS SHALL MEET THE FOLLOWING CONSTRUCTABILITY AND GEOMETRIC REQUIREMENTS:
   A. UNITS SHALL BE CAPABLE OF ATTAINING CONCAVE AND CONVEX CURVES.
   B. UNITS SHALL BE POSITIVELY ENGAGED TO THE UNIT BELOW SO AS TO PROVIDE A MINIMUM 1/16-INCH HORIZONTAL SETBACK PER VERTICAL FOOT OF WALL HEIGHT.
4. SRW UNIT COLOR AND FACE FINISH SHALL BE SELECTED BY PROJECT ARCHITECT OR OWNER.

LEVELING PAD AND UNIT FILL FILL MATERIAL

1. MATERIAL FOR LEVELING PAD SHALL CONSIST OF COMPACTED GRAVEL OR UNREINFORCED CONCRETE AND SHALL BE A MINIMUM OF 6 INCHES IN DEPTH.
2. FILL FOR UNITS SHALL BE FREE-DRAINING 1-INCH MINUS WASHED CRUSHED GRAVEL.
3. DO NOT RUN MECHANICAL VIBRATING PLATE COMPACTORS ON TOP OF THE UNITS. COMPACT UNIT FILL BY RUNNING HAND-OPERATED COMPACTION EQUIPMENT JUST BEHIND UNIT. COMPACT TO MINIMUM 95% OF MODIFIED PROCTOR (ASTM D-1557).

DRAINAGE AGGREGATE

1. DRAINAGE LAYER FOR WALL DRAINAGE MATERIALS SHALL BE 1-INCH MINUS WASHED CRUSHED ROCK MATERIAL AND FREE OF ORGANICS, WITH LESS THAN 5% FINES (SILT AND CLAY PARTICLES PASSING THE #200 SIEVE MEASURED ON THE MINUS #4 SIEVE SIZE).

REINFORCED BACKFILL MATERIAL

1. THE REINFORCED BACKFILL MATERIAL SHALL BE FREE OF DEBRIS AND CONSIST OF A WELL GRADED GRANULAR MATERIAL WITH LESS THAN 5 PERCENT FINES. BACKFILL MATERIAL SHALL BE EVALUATED AND APPROVED BY GEOTECHNICAL ENGINEER PRIOR TO USE.
2. THE REINFORCED BACKFILL MATERIAL SHALL BE PLACED IN MAXIMUM 8-INCH LIFTS AND COMPACTED TO AT LEAST 95% OF THE MODIFIED PROCTOR MAXIMUM DENSITY AS DEFINED BY ASTM D-1557.

COMMON BACKFILL (RETAINED SOIL)

1. SOIL PLACED BEHIND THE INFILL (REINFORCED SOIL ZONE) SHALL BE INORGANIC ON-SITE STRUCTURAL FILL WITH PLASTICITY INDEX <20, OR AS DIRECTED BY THE SOILS ENGINEER. COMMON BACKFILL SHOULD BE PLACED IN ACCORDANCE WITH THE RECOMMENDATIONS FOR STRUCTURAL FILL PRESENTED IN GEOTECHNICAL REPORT.
2. BACKFILL SHALL BE COMPACTED TO A MINIMUM 95% OF THE MODIFIED PROCTOR, MAXIMUM DENSITY AS DEFINED BY ASTM D-1557.

LEVELING PAD CONSTRUCTION

1. LEVELING PAD SHALL BE PLACED AS SHOWN ON THE CONSTRUCTION DETAILS WITH A MINIMUM THICKNESS OF 6 INCHES.
2. FOUNDATION SOIL SHALL BE COMPACTED TO AT LEAST 95% OF MODIFIED PROCTOR. OVEREXCAVATION (OR OTHER METHODS) AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER MAY BE REQUIRED TO PROVIDE A SUITABLE BASE FOR LEVELING PAD CONSTRUCTION. OVEREXCAVATED AREAS SHALL BE BACKFILLED WITH AN APPROVED STRUCTURAL FILL COMPACTED TO AT LEAST 95% OF THE MODIFIED PROCTOR.
3. LEVELING PAD MATERIAL SHALL BE COMPACTED TO PROVIDE A LEVEL HARD SURFACE ON WHICH TO PLACE THE FIRST COURSE OF UNITS. COMPACTION WILL BE BY MECHANICAL PLATE COMPACTORS TO AT LEAST 95% OF MODIFIED PROCTOR DENSITY.
4. LEVELING PAD SHALL BE PREPARED TO PROVIDE INTIMATE CONTACT OF RETAINING WALL UNIT WITH PAD.

SEGMENTAL UNIT INSTALLATION

1. FIRST COURSE OF SRW UNITS SHALL BE PLACED ON THE LEVELING PAD. THE UNITS SHALL BE CHECKED FOR LEVEL AND ALIGNMENT. THE FIRST COURSE IS THE MOST IMPORTANT TO ENSURE ACCURATE AND ACCEPTABLE RESULTS.
2. ENSURE THAT UNITS ARE IN FULL CONTACT WITH BASE.
3. UNITS ARE PLACED SIDE BY SIDE FOR FULL LENGTH OF STRAIGHT WALL ALIGNMENT. ALIGNMENT MAY BE DONE BY MEANS OF A STRING LINE OR OFFSET FROM BASE LINE TO A MOLDED FINISHED FACE OF THE SRW UNIT. ADJUST UNIT SPACING FOR CURVED SECTIONS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
4. INSTALL SHEAR CONNECTORS.
5. PLACE UNIT FILL. TAMP OR ROD UNIT FILLS TO ENSURE ALL VOIDS ARE COMPLETELY FILLED.
6. PLACE AND COMPACT FILL BEHIND AND WITHIN UNITS.
7. CLEAN ALL EXCESS DEBRIS FROM TOP OF UNITS AND INSTALL NEXT COURSE. ENSURE EACH COURSE IS COMPLETELY FILLED PRIOR TO PROCEEDING TO NEXT COURSE.
8. LAY EACH SUCCESSIVE COURSE ENSURING THAT SHEAR CONNECTORS ARE ENGAGED.
9. MAXIMUM STACKED VERTICAL HEIGHT OF WALL UNITS, PRIOR TO UNIT FILL AND BACKFILL PLACEMENT AND COMPACTION, SHALL NOT EXCEED TWO COURSES.
10. REPEAT PROCEDURES TO THE EXTENT OF THE WALL HEIGHT.
11. UPPERMOST ROW OF SRW OR CAPS SHALL BE GLUED TO UNDERLYING UNITS WITH AN ADHESIVE, AS RECOMMENDED BY THE MANUFACTURER.

GEOSYNTHETIC REINFORCEMENT INSTALLATION

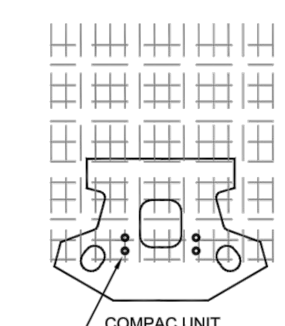
1. THE GEOSYNTHETIC REINFORCEMENT SHALL BE INSTALLED AT THE WALL HEIGHT, HORIZONTAL LOCATION, AND TO THE EXTENT AS SHOWN ON THE CONSTRUCTION DETAILS.
2. THE GEOSYNTHETIC REINFORCEMENT SHALL BE LAID HORIZONTALLY ON COMPACTED INFILL AND CONNECTED TO THE CONCRETE SRW UNITS PER MANUFACTURER'S RECOMMENDATIONS.
3. CORRECT ORIENTATION (ROLL DIRECTION) OF THE GEOSYNTHETIC REINFORCEMENT SHALL BE VERIFIED BY THE CONTRACTOR.
4. PLACE SEGMENTAL UNIT AND FILL IN ACCORDANCE WITH SECTION ABOVE SEGMENTAL RETAINING WALL UNITS.
5. THE GEOSYNTHETIC REINFORCEMENT SHALL BE PULLED TAUT AND FREE OF WRINKLES PRIOR TO PLACEMENT OF SOIL FILL. STAKE OR SECURE BACK EDGE OF GEOGRID PRIOR TO AND DURING BACKFILL AND COMPACTION.
6. THE PROCEDURE FOR TENSIONING GEOSYNTHETIC REINFORCEMENT SHALL BE UNIFORM THROUGHOUT WALL LENGTH AND HEIGHT.
7. OVERLAPS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. GEOSYNTHETIC REINFORCEMENT WILL BE CONTINUOUS THROUGHOUT WALL LENGTH, EXCEPT FOR CURVES.

FILL PLACEMENT OVER GEOSYNTHETIC REINFORCEMENT

1. REINFORCED WALL FILL MATERIAL SHALL BE PLACED IN MAXIMUM 8-INCH LOOSE LIFTS ON THE GEOSYNTHETIC REINFORCEMENT.
2. THE GEOSYNTHETIC REINFORCEMENT SHALL BE PRETENSIONED BY HAND TO REMOVE WRINKLES. TENSIONING IS USUALLY FACILITATED BY THE USE OF STEEL STAKES. APPLY CONSTANT TENSION TO EACH SECTION OF GEOSYNTHETIC REINFORCEMENT UNTIL SOIL FILL HAS BEEN PLACED. SOIL FILL SHALL BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER THAT PREVENTS THE DEVELOPMENT OF WRINKLES AND/OR MOVEMENT OF THE GEOSYNTHETIC REINFORCEMENT.
3. ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET FROM THE TAIL OF THE MODULAR CONCRETE UNITS.
4. IF POSSIBLE, SOIL FILL SHALL BE PLACED FROM THE WALL FACE OUTWARD TO ENSURE THAT THE GEOSYNTHETIC REINFORCEMENT REMAINS TAUT. SOIL SHALL BE PLACED IN UNIFORM LIFTS.
5. TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOSYNTHETIC REINFORCEMENT. A MINIMUM FILL THICKNESS OF 8 INCHES IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOSYNTHETIC REINFORCEMENT. TURNING OF TRACKED VEHICLES SHOULD BE KEPT TO A MINIMUM TO PREVENT TRACKS FROM DISPLACING THE FILL AND DAMAGING THE GEOSYNTHETIC REINFORCEMENT.
6. IF IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, RUBBER-TIRED EQUIPMENT MAY PASS OVER THE GEOSYNTHETIC REINFORCEMENT AT SLOW SPEEDS, LESS THAN 10 MPH. SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED.
7. SURFACE DRAINAGE DURING AND AFTER CONSTRUCTION OF THE WALL SHALL BE PROVIDED TO MINIMIZE WATER INFILTRATION IN THE REINFORCED SOIL ZONE.

CONSTRUCTION MONITORING

1. **FULL-TIME OBSERVATION OF THE WALL CONSTRUCTION, INCLUDING FOUNDATION SOIL, LEVELING PAD CONSTRUCTION, DRAINAGE, GRID PLACEMENT, AND BACKFILL, BY THE GEOTECHNICAL ENGINEER IS REQUIRED.**



GRID AND PIN CONNECTION

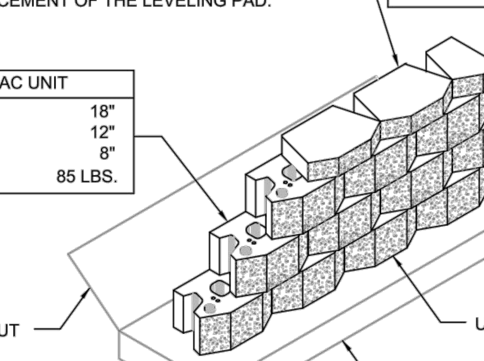
NO SCALE

COMPAC / STANDARD - BASE LEVELING PAD NOTES:

1. THE LEVELING PAD IS TO BE CONSTRUCTED OF CRUSHED STONE OR 2,000 PSI± UNREINFORCED CONCRETE.
2. THE BASE FOUNDATION IS TO BE APPROVED BY THE SITE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE LEVELING PAD.

MINI CAP UNIT - TYP	
WIDTH	18"
* DEPTH	10"
HEIGHT	4"
* WEIGHT	45 LBS.

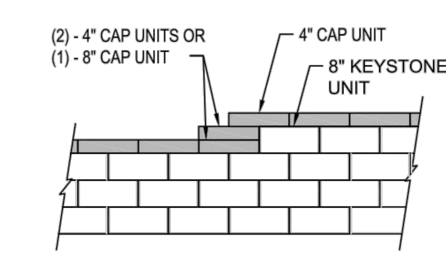
COMPAC UNIT	
WIDTH	18"
* DEPTH	12"
HEIGHT	8"
* WEIGHT	85 LBS.



COMPAC UNIT

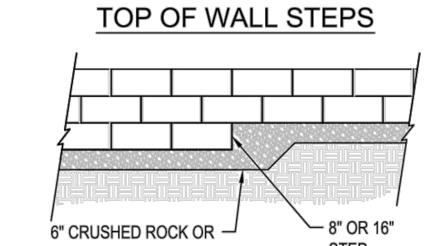
BASE PAD ISOMETRIC VIEWS

NO SCALE



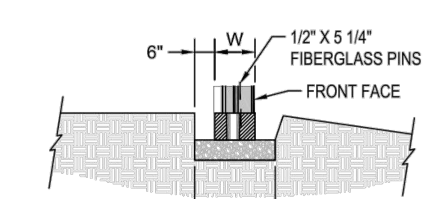
NOTE:
1. SECURE ALL CAP UNITS WITH KEYSTONE KAPSEAL OR EQUAL.

TOP OF WALL STEPS



ELEVATION

NOTE:
1. THE LEVELING PAD IS TO BE CONSTRUCTED OF CRUSHED STONE OR 2000 PSI ± REINFORCED CONCRETE.



SECTION

LEVELING PAD DETAIL

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GOAT HILL DRAINAGE IMPROVEMENTS PHASE 1
NE 117TH PLACE
KIRKLAND, WASHINGTON

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FIGURE	W3

20220263 Goat Hill Walls Segment Block.dwg LAYOUT: E002 Wall

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

RETAINING WALL PLANS AND DETAILS

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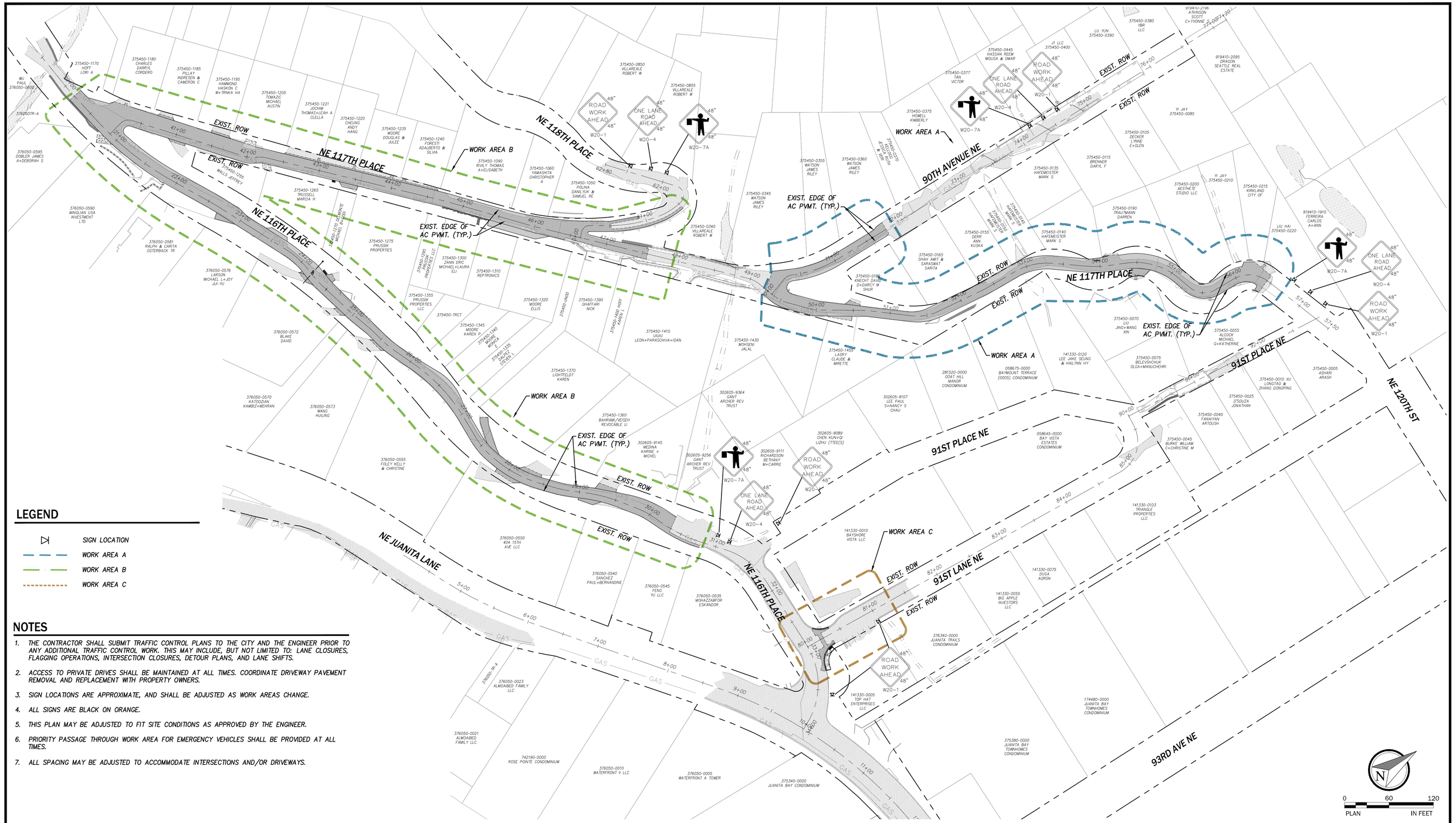

LEGEND

- SIGN LOCATION
- WORK AREA A
- WORK AREA B
- WORK AREA C

NOTES

1. THE CONTRACTOR SHALL SUBMIT TRAFFIC CONTROL PLANS TO THE CITY AND THE ENGINEER PRIOR TO ANY ADDITIONAL TRAFFIC CONTROL WORK. THIS MAY INCLUDE, BUT NOT LIMITED TO: LANE CLOSURES, FLAGGING OPERATIONS, INTERSECTION CLOSURES, DETOUR PLANS, AND LANE SHIFTS.
2. ACCESS TO PRIVATE DRIVES SHALL BE MAINTAINED AT ALL TIMES. COORDINATE DRIVEWAY PAVEMENT REMOVAL AND REPLACEMENT WITH PROPERTY OWNERS.
3. SIGN LOCATIONS ARE APPROXIMATE, AND SHALL BE ADJUSTED AS WORK AREAS CHANGE.
4. ALL SIGNS ARE BLACK ON ORANGE.
5. THIS PLAN MAY BE ADJUSTED TO FIT SITE CONDITIONS AS APPROVED BY THE ENGINEER.
6. PRIORITY PASSAGE THROUGH WORK AREA FOR EMERGENCY VEHICLES SHALL BE PROVIDED AT ALL TIMES.
7. ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERSECTIONS AND/OR DRIVEWAYS.

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GOAT HILL DRAINAGE DITCH CONVEYANCE AND CHANNEL STABILIZATION – PHASE 1

TRAFFIC CONTROL PLAN

C7.00

51 / 51

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