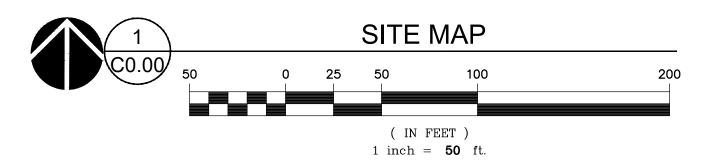


| NOTICE TO EXCAVATORS: ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS (503)-232-1987). | | |
|---|--|--|
| POTENTIAL UNDERGROUND FACILITY OWNERS | | |
| Dig Safely. | | |
| Call the Oregon One-Call Center DIAL 811 or 1-800-332-2344 | | |
| EMERGENCY TELEPHONE NUMBERS | | |
| NW NATURAL GAS M-F 7am-6pm 503-226-4211 Ext.4313 AFTER HOURS 503-226-4211 PGE 503-464-7777 QWEST 1-800-573-1311 CITY BUREAU OF MAINTENANCE 503-823-1700 CITY WATER 503-823-4874 VERIZON 1-800-483-1000 | | |

CIVIL SITE IMPROVEMENTS



PROJECT LOCATION 11507 SW AMU STREET TUALATIN, OREGON LATITUDE = 45°22'28" LONGITUDE = -122°47'57"

PROPERTY DESCRIPTION

LOT 12, "FRANKLIN BUSINESS PARK" NO. 6 NW ¹/₄ OF SECTION 27 T. 2 S., R. 1 W., W.M. CITY OF TUALATIN WASHINGTON COUNTY, OREGON

EXISTING LAND USE THE SITE IS CURRENTLY UNDEVELOPED

VERTICAL DATUM NGVD '29. SEE "BASIS OF ELEVATIONS" DESCRIPTION ON TOPOGRAPHIC SURVEY SHEET C0.01

AREA SUMMARY TOTAL SITE AREA = 217,682 SF (5.00 AC)

NEW IMPERVIOUS AREA • WITHIN PUBLIC RIGHT-OF-WAY: ± 0 SF WITHIN PRIVATE PROPERTY: ±191,301 SF

APPLICANT

MARTIN DEVELOPMENT PO BOX 15523 SEATTLE, WA 98115 CONTACT: MAC MARTIN PHONE: (206) 399-6676 macmartinis@gmail.com

CIVIL ENGINEER MACKENZIE

CONTACT: GREG MINO 1515 SE WATER AVE PORTLAND, OR 97214

PHONE: 503-224-9560

gmino@mcknze.com

ARCHITEC1

LANCE MUELLER & ASSOCIATES CONTACT: BOB WELLS 130 LAKESIDE AVENUE, SUITE 250 SEATTLE, WA 98122 PHONE: 206-325-2553 bwells@Imueller.com

GEOTECHNICAL ENGINEER

GEOENGINEERS, INC. CONTACT: GREG LANDAU 4000 KRUSE WAY PLACE, BLDG 3, STE 200 LAKE OSWEGO, OR 97035 PHONE: 503-603-6652 glandau@geoengineers.com

CITY OF TUALATIN PUBLIC WORKS DEPARTMENT CONTACT: MARK SCHLAGEL 10699 HERMAN ROAD TUALATIN, OR 97062 PHONE: 503-691-3059

UTILITY PROVIDERS

PORTLAND GENERAL ELECTRIC 9480 SW BOECKMAN ROAD WILSONVILLE, OR 97070 PHONE: 503-672-5428 CONTACT: TRAVIS SMALLWOOD NW NATURAL GAS

220 NW 2ND AVENUE PORTLAND, OR 97209 PHONE: 503-226-4211

mschlagel@tualatin.gov

TVF&R 11945 SW 70TH AVE TIGARD, OR 97223 PHONE: 503-699-8577 CONTACT: TOM MOONEY

COMCAST 14200 SW BRIGADOON PLACE BEAVERTON, OR 97005 PHONE: 503-605-4834

FRONTIER 4155 SW CEDAR HILLS BOULEVARD BEAVERTON, OR 97075 PHONE: 503-641-2004

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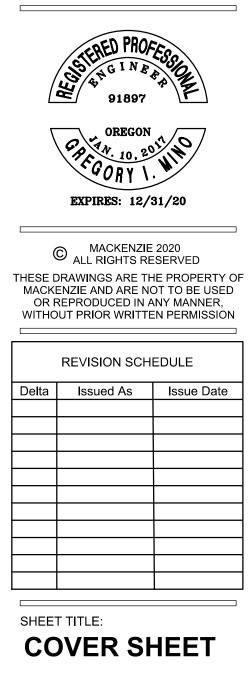
Architecture - Interiors Planning - Engineering

Portland, OR 503.224.9560 Vancouver, WA 360.695.7879 **Seattle, WA** 206.749.9993 www.mcknze.com MACKENZIE. DESIGN DRIVEN I CLIENT FOCUSED

MARTIN **DEVELOPMENT NW** PO BOX 15523 SEATTLE, WA 98115

Project





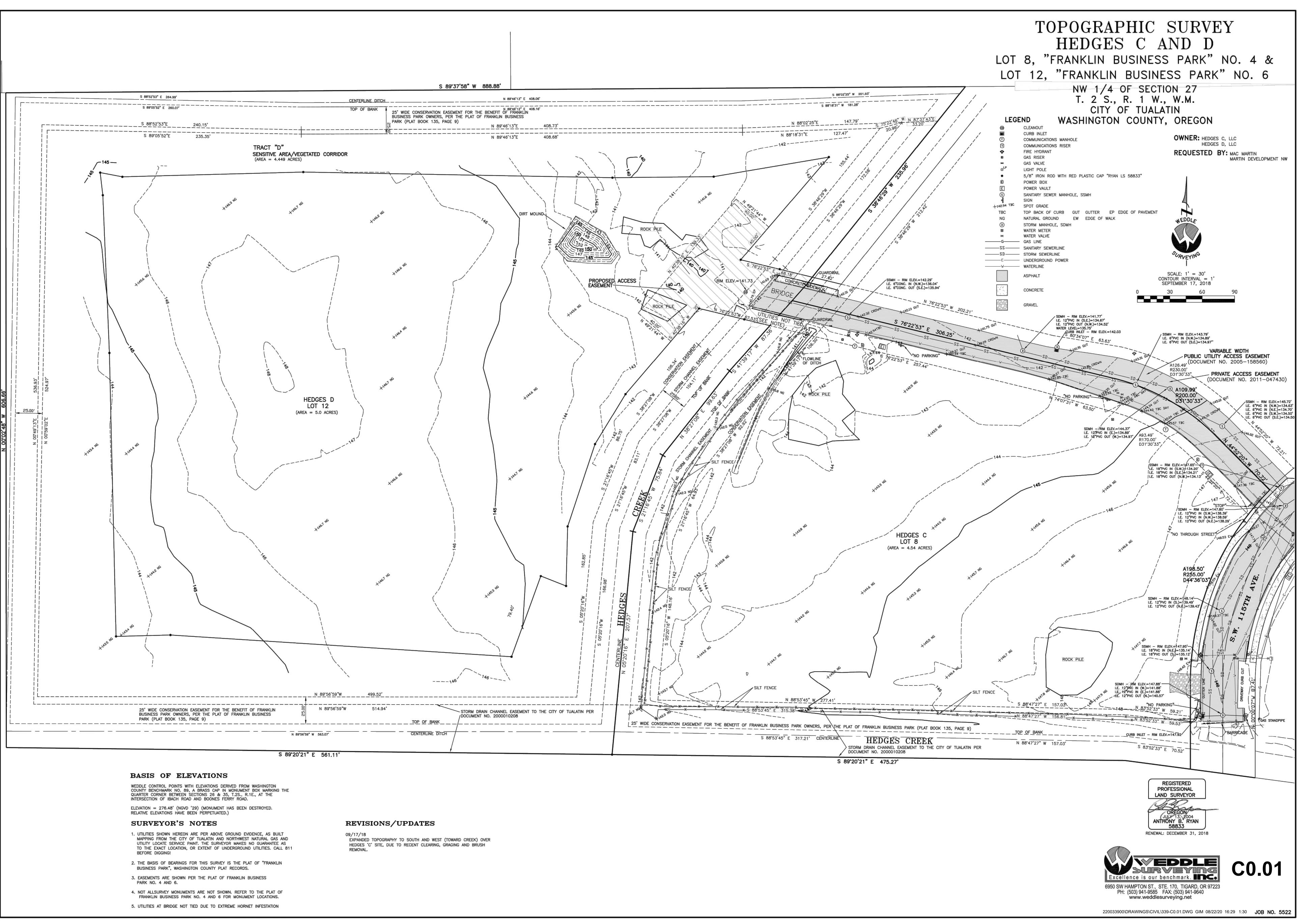
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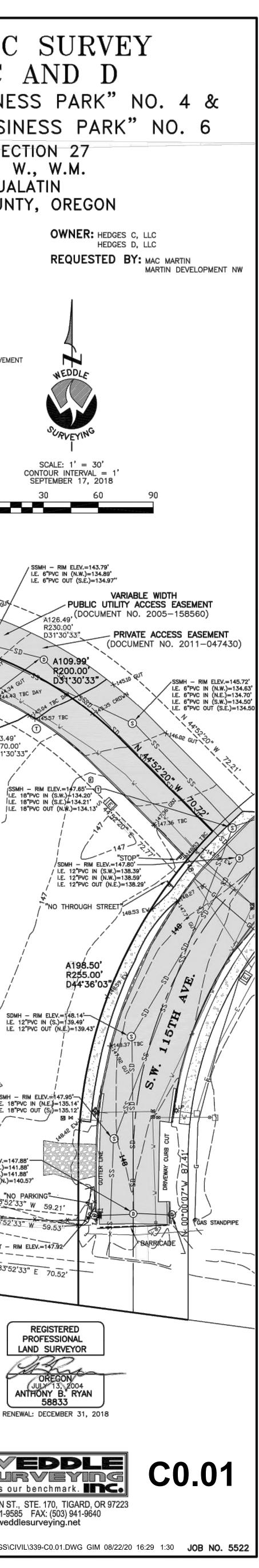
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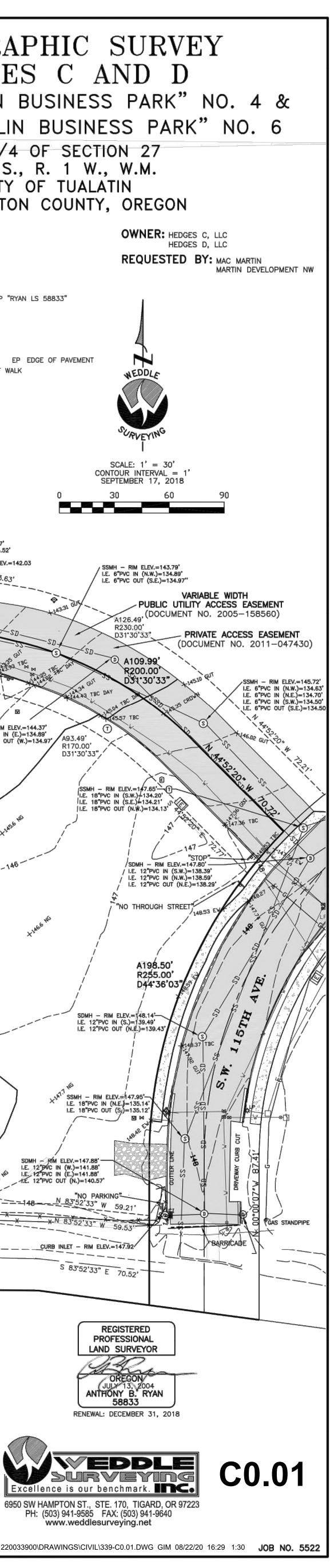
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GRADING SPECIFICATION NOTES

REFER TO THE PROJECT GEOTECHNICAL REPORT FOR ALL GRADING RELATED SPECIFICATIONS.

SITE WORK SPECIFICATION NOTES

- 1. BASE ROCK FOR CONCRETE SLABS, PAVEMENT, AND SIDEWALKS: 3/4 INCH CRUSHED AGGREGATE BASE IN ACCORDANCE WITH STATE DEPARTMENT OF TRANSPORTATION (DOT) SPECIFICATIONS, LATEST EDITION
- 2. PLACE AGGREGATE IN MAXIMUM 4 INCH LAYERS. ROLLER COMPACT TO SPECIFIED DENSITY. USE MECHANICAL TAMPING EQUIPMENT IN AREAS INACCESSIBLE TO ROLLER EQUIPMENT. COMPACT AGGREGATE BASE TO MINIMUM 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557
- 3. WHERE NOT NOTED ON PLANS, ENSURE 0.5% MINIMUM SLOPE ON CONCRETE SURFACES, 1.0% ON ASPHALT SURFACES, AND 2.0% IN LANDSCAPED AREAS
- 4. HOT MIX ASPHALT CONCRETE (HMAC): LEVEL 2, 1/2 INCH DENSE-GRADED HMAC PER STATE DOT SPECIFICATIONS. PG 64-22 OR BETTER
- A. PLACE HMAC OVER PREPARED AND COMPACTED AGGREGATE BASE PER PLAN. MINIMUM COMPACTED LIFT THICKNESS: 2.0 INCHES. MAXIMUM COMPACTED LIFT THICKNESS: 3.0 INCHES B. COMPACT HMAC TO MINIMUM DENSITY 91% OF ASTM D2041 LABORATORY DENSITY.
- C. SEAL COAT (FOG COAT): EMULSIFIED ASPHALT FOG COAT, CSS-1, CSS-1H, OR HFRS-P1 TYPE PER STATE DOT SPECIFICATIONS
- C.1. PREPARE EMULSIFIED ASPHALT PER MANUFACTURER'S REQUIREMENTS. APPLY UNIFORMLY WITH AN ASPHALT DISTRIBUTOR AT A RATE OF 0.10 TO 0.15 GALLONS PER SQUARE YARD, OR AS RECOMMENDED BY THE MANUFACTURER. PROTECT SEALED ASPHALT PAVEMENT SURFACE FROM VEHICLE AND FOOT TRAFFIC UNTIL CURED
- 5. SITE CONCRETE: ALL MATERIALS AND WORK SHALL CONFORM WITH ACI 318, LATEST EDITION
- A. COMPRESSIVE STRENGTH (PSI) AT 28 DAYS: A.1. VEHICULAR PAVEMENTS: 4,000 (MINIMUM)
- A.2. PEDESTRIAN PAVEMENTS: 3,000 (MINIMUM)
- A.3. CURBS AND GUTTERS: 3,000 (MINIMUM)
- B. JOINTS: ALIGN CURB, GUTTER, AND SIDEWALK JOINTS
- B.1. PROVIDE SCORED JOINTS AT 5 FOOT MAXIMUM INTERVALS, EVENLY SPACED, BETWEEN SIDEWALKS AND CURBS, BETWEEN CURBS AND PAVEMENT, OR AS INDICATED ON PLAN. B.2. PROVIDE EXPANSION JOINTS EVERY FOURTH JOINT TO SEPARATE PAVING FROM VERTICAL SURFACES AND UTILITY PENETRATIONS, OR AS INDICATED ON PLAN
- C. FINISHING:
- C.1. PAVEMENTS: BROOM FINISH, PERPENDICULAR TO DIRECTION OF TRAVEL C.2. SIDEWALKS: LIGHT BROOM, PERPENDICULAR TO DIRECTION OF TRAVEL, TROWELED AND RADIUSED EDGE, 1/8 TO 1/4 INCH RADIUS. NO SHINERS UNLESS SPECIFICALLY CALLED
- FOR ON PLAN C.3. CURBS AND GUTTERS: LIGHT BROOM, PARALLEL TO PAVEMENT DIRECTION
- 6. PAINTED PAVEMENT MARKINGS:
- A. PAINT: MPI NO. 97 (OR EQUAL) LATEX TRAFFIC MARKING PAINT, WHITE (FOR STANDARD PARKING STRIPING) OR AS INDICATED ON PLAN
- A.1. PREPARATION: CLEAN PAVEMENT SURFACES THOROUGHLY PRIOR TO INSTALLATION. PREPARE SURFACES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
- A.2. INSTALLATION: APPLY PAINT WHEN PAVEMENT SURFACE OR THE ATMOSPHERE TEMPERATURE IS BETWEEN 50 DEGREES AND 95 DEGREES F. APPLY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. APPLY PAINT IN ONE COAT ONLY. FOR SYMBOLS, UTILIZE A TEMPLATE THAT WILL PROVIDE TRUE, SHARP EDGES AND ENDS FOR THE PAVEMENT MARKING. PROTECT NEWLY PAINTED MARKINGS FROM DISTURBANCE AND TRACKING
- A.3. PAVEMENT MARKING REMOVAL: SANDBLAST OR OTHER METHOD OF COMPLETE REMOVAL OF SPECIFIED MARKING. BLACKOUT METHODS MUST BE APPROVED BY THE OWNER
- 7. CHAIN LINK FENCE AND GATE MATERIALS AND INSTALLATION SHALL BE CONFORMANT WITH THE CHAIN LINK FENCE MANUFACTURER'S INSTITUTE PRODUCT MANUAL AND ASSOCIATED SPECIFICATIONS

PRIVATE UTILITY SPECIFICATION NOTES

- 1. PRODUCTS:
- B. DOMESTIC WATER:
- B.1. PLASTIC PIPE CONFORMING TO THE STATE PLUMBING CODE, LATEST EDITION, WITH PRESSURE RATED FITTINGS PER MANUFACTURER RECOMMENDATIONS C. FIRE WATER:
- C.1. PLASTIC PIPE CONFORMING TO AWWA C900, RATED FOR 200 PSI MINIMUM, WITH MECHANICAL JOINT FITTINGS/RESTRAINTS PER MANUFACTURER RECOMMENDATIONS.
- C.2. IF WITHIN 5 FOOT OF A BACKFLOW PREVENTOR, USE DUCTILE IRON PIPE CONFORMANT WITH THE CITY OF TUALATIN TECHNICAL SPECIFICATIONS. C.3. BACKFLOW PREVENTER: CONTRACTOR TO CONFIRM WITH AGENCY HAVING JURISDICTION
- (AHJ). IF AHJ DOES NOT SPECIFY, USE DOUBLE CHECK DETECTOR FIRE PROTECTION BACKFLOW PREVENTION ASSEMBLY COMPLIANT WITH THE STATE PLUMBING CODE
- D. SANITARY SEWER:
- D.1. PLASTIC PIPE CONFORMING TO ASTM D3034, LATEST EDITION, WITH ELASTOMERIC GASKETED CONNECTIONS AND WYE FITTINGS PER MANUFACTURER RECOMMENDATIONS E. STORM DRAINAGE:
- E.1. PLASTIC PIPE CONFORMING TO ASTM D3034, LATEST EDITION, WITH ELASTOMERIC GASKETED CONNECTIONS AND WYE FITTINGS PER MANUFACTURER RECOMMENDATIONS

- F. MANHOLES:
- **IDENTIFYING NAME**
- G. TRACER WIRE:
- LETTERS
- 3. INSTALLATION:
- B. PIPE COVER:

VERTICALLY)

- B.1. WATER: 36 INCH MINIMUM
- TO PROTECT SHALLOW PIPING DURING CONSTRUCTION
- SEPARATION AT PIPE CROSSINGS
- PIPING UNLESS NOTED OTHERWISE ON PROJECT PLANS
- WITH RIP RAP.
- H. MANHOLES: ALL SANITARY MANHOLES SHALL BE CHANNELIZED. STORM MANHOLES SHALL MARKED TO IDENTIFY TYPE OF UTILITY
- UNLESS THE AUTHORITY HAVING JURISDICTION ALLOWS FOR INSTALLATION IN A VAULT
- RESTRAINT LENGTH SIZING CALCULATIONS WITH WATER SYSTEM PRODUCT SUBMITTAL

- F.3. MANHOLE STEPS: FORMED GALVANIZED STEEL RUNGS, 3/4 INCH DIAMETER

F.1. REINFORCED PRECAST CONCRETE IN ACCORDANCE WITH ASTM C478 (ASTM C478M) WITH RESILIENT CONNECTORS COMPLYING WITH ASTM C923 (ASTM C923M)

F.2. LID AND FRAME: ASTM A48/A48M, CLASS 30B CAST IRON CONSTRUCTION, MACHINED FLAT BEARING SURFACE, REMOVABLE LID, H-20 LOAD RATED, WITH LID MOLDED WITH

G.1. MAGNETIC DETECTABLE CONDUCTOR, CLEAR PLASTIC COVERING, IMPRINTED WITH THE NAME OF THE TYPE OF UTILITY SERVICE (I.E. "STORM SEWER SERVICE") IN LARGE

2. SEE PROJECT GEOTECHNICAL REPORT FOR UTILITY TRENCHING AND BACKFILL SPECIFICATIONS

B.2. STORM AND SANITARY: 12 INCH MINIMUM. PLASTIC PIPING SHALL BE SUBSTITUTED FOR DUCTILE IRON PIPING (CONFORMANT WITH ASTM A746) WHERE MINIMUM COVER CANNOT BE ACHIEVED. THE CONTRACTOR SHALL CONSULT WITH ENGINEER OF RECORD PRIOR TO MAKING THE MATERIAL SUBSTITUTION AND SHALL TAKE NECESSARY PRECAUTIONS

C. SANITARY SEWER AND WATER PIPES: WHERE SANITARY SEWER PIPING WILL BE INSTALLED WITHIN 10 FEET OF A DOMESTIC WATER PIPE, AND AS APPROVED BY THE LOCAL BUILDING OFFICIAL, THE SANITARY PIPE SHALL BE MADE OF A MATERIAL APPROVED FOR USE WITHIN A BUILDING (I.E. PVC SCHEDULE 40). HOWEVER, IN NO CASE SHALL THE SANITARY LINE BE LOCATED WITHIN 12 INCHES OF A DOMESTIC WATER LINE (BOTH HORIZONTALLY AND

D. PIPE CROSSINGS/SEPARATION: MAINTAIN MINIMUM SEPARATION OF WATER MAIN FROM SEWER PIPING IN ACCORDANCE WITH LOCAL AGENCY AND STATE PLUMBING CODES, LATEST EDITIONS. WHERE NOT REGULATED BY CODE, MAINTAIN A MINIMUM OF 12 INCH VERTICAL

E. GRAVITY SYSTEMS: MAINTAIN MINIMUM SLOPES AS DEFINED BY LOCAL AGENCY AND STATE PLUMBING CODES. WHERE NOT REGULATED BY CODE OR INDICATED ON PLANS, MAINTAIN A MINIMUM OF 1.0% SLOPE ON ALL SANITARY SEWER PIPING AND 0.5% ON ALL STORM DRAIN

F. PIPE OUTLETS: ALL EXPOSED PIPE INLETS AND OUTLETS SHALL BE PROPERLY STABILIZED

G. CATCH BASINS: ALL CATCH BASINS TO HAVE A 24 INCH MINIMUM SUMP AND HOODED OUTLET UNLESS NOTED OTHERWISE ON PROJECT PLANS

PROVIDE A 24 INCH SUMP UNLESS UNLESS OTHERWISE SPECIFIED ON PROJECT PLANS. ENSURE WATERTIGHT SEAL AT ALL PIPE PENETRATIONS TO MANHOLES. LIDS SHALL BE

I. CLEANOUTS: CLEANOUTS SHALL BE PROVIDED IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE, LATEST EDITION (AT A MINIMUM, EVERY 100 LINEAL FEET OF PIPE RUN OR EVERY 135 DEGREE OF CUMULATIVE ANGLE). CLEANOUTS SHALL BE OF THE SAME SIZE OF THE PIPE THEY ARE SERVING. LIDS SHALL BE MARKED TO IDENTIFY TYPE OF UTILITY

J. BACKFLOW PREVENTERS: BACKFLOW PREVENTERS SHALL BE INSTALLED IN A COMPLIANT UNDERGROUND VAULT (EXCEPT REDUCED PRESSURE DEVICES) WITH SUMP PUMP DISCHARGING TO AN APPROVED DISCHARGE POINT. VAULT SHALL BE SIZED TO ACCOMMODATE THE INSTALLATION OF AN FDC ON THE DOWNSTREAM END WITHIN THE VAULT, EVEN IF THE FDC IS NOT INSTALLED AT TIME OF VAULT INSTALLATION. REDUCED PRESSURE DEVICES SHALL BE INSTALLED IN AN ABOVE GROUND HEATED ENCLOSURE,

K. MECHANICAL JOINT RESTRAINTS: UNLESS NOTED OTHERWISE, ALL FIRE WATER SUPPLY SYSTEMS SHALL BE PROVIDED WITH MECHANICAL JOINT RESTRAINTS AT FITTINGS, CALCULATED AND SIZED BASED ON PROJECT CONDITIONS. CONTRACTOR SHALL PROVIDE

GENERAL NOTES

- 1. ALL WORK SHALL CONFORM TO THE CURRENT STANDARD SPECIFICATIONS AND REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION AND THE CURRENT AMERICAN PUBLIC WORKS ASSOCIATION STANDARDS FOR PUBLIC WORKS CONSTRUCTION
- 2. THE SURVEY INFORMATION SHOWN AS A BACKGROUND SCREEN IS BASED ON A SURVEY BY OTHERS AND IS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS WITH ITS OWN RESOURCES PRIOR TO START OF ANY CONSTRUCTION
- CONTRACTOR MUST COMPLY WITH LOCAL AND STATE REQUIREMENTS TO NOTIFY ALL UTILITY COMPANIES FOR LINE LOCATIONS SEVENTY-TWO (72) HOURS (MINIMUM) PRIOR TO START OF WORK. DAMAGE TO UTILITIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE
- CONTRACTOR SHALL ADJUST ALL STRUCTURES IMPACTED BY CONSTRUCTION IMPROVEMENTS TO NEW FINISH GRADES
- 5. REQUEST BY THE CONTRACTOR FOR CHANGES TO THE PLANS MUST BE APPROVED BY THE ENGINEER.
- 6. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY REQUIRES A PUBLIC WORKS PERMIT CONTRACTOR SHALL PROVIDE THE ENGINEER OF RECORD WITH AS-BUILT PLANS AT LEAST 2
- WEEKS PRIOR TO REQUESTING AGENCY SIGN OFF ON PERMITS FOR OCCUPANCY 8. CONTRACTOR SHALL PERFORM ALL THE WORK SHOWN ON THE DRAWINGS AND ALL

INCIDENTAL WORK NECESSARY TO COMPLETE THE PROJECT

DEMOLITION NOTES

- 1. INSTALL EROSION CONTROL MEASURES AND TEMPORARY FENCING PRIOR TO ANY DEMOLITION ACTIVITIES
- DEMOLISH AND REMOVE ALL STRUCTURES AND ASSOCIATED FEATURES (APPURTENANCES), AS SHOWN
- 3. DEMOLISH ALL PAVED AREAS ON SITE AS SHOWN, DOWN TO NATIVE SUBGRADE 4. ALL VEGETATION AND DELETERIOUS MATERIALS WITHIN THE LIMITS OF WORK SHALL BE STRIPPED AND REMOVED FROM THE SITE PRIOR TO GRADING WORK, UNLESS NOTED OTHERWISE (E.G. PROTECTED TREES)
- 5. PROTECT ALL EXISTING LANDSCAPING AT AND BEYOND LIMITS OF WORK
- PROTECT ALL UNDERGROUND UTILITY SERVICES AND CONDUIT UNLESS NOTED OTHERWISE 7. WHERE APPLICABLE, VERIFY DISCONNECT OF GAS AND ELECTRIC WITH UTILITY. CUT/CAP UTILITY SERVICES (STORMWATER AND SANITARY WITHIN 5 FEET OF EDGE OF R.O.W.) CAP
- WATERLINE ON OWNER'S SIDE OF METER AND PERFORM OTHER DEMOLITION TASKS AS REQUIRED. ADDITIONAL REMOVALS MAY BE REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND THE CONTRACTOR SHALL CONFIRM ACCORDINGLY PRIOR TO BID

GRADING NOTES

- ROUGH GRADING: ROUGH GRADE TO ALLOW FOR DEPTH OF BUILDING SLABS, PAVEMENTS, BASE COURSES, AND TOPSOIL PER DETAILS AND SPECIFICATIONS
- FINISH GRADING: BRING ALL FINISH GRADES TO LEVELS INDICATED. WHERE GRADES ARE NOT OTHERWISE INDICATED, HARDSCAPE FINISH GRADES ARE TO BE THE SAME AS ADJACENT SIDEWALKS, CURBS, OR THE OBVIOUS GRADE OF ADJACENT STRUCTURE. SOFTSCAPE GRADES (INCLUDING ADDITIONAL DEPTH OF TOPSOIL) SHALL BE SET 6 INCHES BELOW BUILDING FINISHED FLOORS WHERE ABUTTING BUILDINGS, 1-2 INCHES WHERE ABUTTING WALKWAYS OR CURBS, OR MATCHING OTHER SOFTSCAPE GRADES. GRADE TO UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE GRADES ARE GIVEN, ROUND OFF SURFACES, AVOID ABRUPT CHANGES IN LEVELS. AT COMPLETION OF JOB AND AFTER BACKFILLING BY OTHER TRADES HAS BEEN COMPLETED, REFILL AND COMPACT AREAS WHICH HAVE SETTLED OR ERODED TO BRING TO FINAL GRADES

ABBREVIATIONS

| ARCH | ARCHITECTURAL | RD | ROOF DRAIN | |
|------|--------------------------|------|----------------------------|-----------|
| BW | BOTTOM OF WALL | ROW | RIGHT OF WAY | LOT/ROW |
| СВ | CATCH BASIN | SAN | SANITARY SEWER | LIMITS OF |
| С | COMPACT | STM | STORM | CENTERL |
| CL | CENTERLINE | тс | TOP OF CURB | STORM DI |
| СО | CLEANOUT | TW | TOP OF WALL | CONSERV |
| CRB | CRUSHED ROCK BASE | TYP | TYPICAL | WETLAND |
| ELEV | ELEVATION | WM | WATER METER | CONTOUF |
| EX | EXISTING | AP | ANGLE POINT | RIDGE LIN |
| E.W. | EACH WAY | COMM | COMMUNICATIONS | VEHICLE |
| FG | FINISHED GRADE | DDC | DOUBLE DETECTOR CHECK | SANITARY |
| FF | FINISHED FLOOR ELEVATION | DI | DUCTILE IRON | STORM PI |
| FH | FIRE HYDRANT | DR | DRIVE | FIRE WAT |
| FW | FIRE WATER | DWG | DRAWING | DOMESTIC |
| GPM | GALLONS PER MINUTE | ELEC | ELECTRICAL | GAS LINE |
| IE | INVERT ELEVATION | FDC | FIRE DEPARTMENT CONNECTION | WATER V |
| INV | INVERT | FLG | FLANGE | RIP RAP |
| LS | LANDSCAPE | GV | GATE VALVE | FIRE HYDI |
| MAX | MAXIMUM | LT | LEFT | CATCH BA |
| МН | MANHOLE | MJ | MECHANICAL JOINT | MANHOLE |
| MIN | MINIMUM | NO. | NUMBER | STREET/S |
| NTS | NOT TO SCALE | PR | PROPOSED | SIGN |
| OC | ON CENTER | SCH | SCHEDULE | FLOW CO |
| PCC | PORTLAND CEMENT CONCRETE | ST | STREET | |
| PIV | POST INDICATOR VALVE | STA | STATION | |
| PSI | POUNDS PER SQUARE INCH | SW | SOUTHWEST | |
| | | 0 | | |

- CONTROL

UTILITY NOTES

LEGEND SEE SHEET R2.0 FOR PUBLIC WATER FACILITY LEGEND

3. EXCAVATION: EXCAVATE FOR SLABS, PAVING, AND OTHER IMPROVEMENTS TO SIZES AND LEVELS SHOWN OR REQUIRED. ALLOW FOR FORM CLEARANCE AND FOR PROPER COMPACTION OF REQUIRED BACKFILLING MATERIAL. DAMAGE TO UTILITIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE

4. EFFECTIVE EROSION PREVENTION AND SEDIMENT CONTROL IS REQUIRED. EROSION CONTROL DEVICES MUST BE INSTALLED AND MAINTAINED MEETING THE LOCAL AGENCY AND STATE AGENCY REQUIREMENTS. THE AUTHORITIES HAVING JURISDICTION MAY, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE EROSION

DRAINAGE SHALL BE CONTROLLED WITHIN THE WORK SITE AND SHALL BE ROUTED SO THAT ADJACENT PRIVATE PROPERTY, PUBLIC PROPERTY, AND THE RECEIVING SYSTEM ARE NOT ADVERSELY IMPACTED. THE ENGINEER AND/OR AUTHORITIES HAVING JURISDICTION MAY, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE DRAINAGE CONTROL

SITE TOPSOIL STOCKPILED DURING CONSTRUCTION AND USED FOR LANDSCAPING SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT

7. CONTRACTOR TO REVIEW AND CONFIRM GRADES AT JOIN POINTS, SUCH AS AT DAYLIGHT LIMITS AND BUILDING ENTRANCES, PRIOR TO CONSTRUCTION

8. ACCESSIBLE PARKING SPACES AND LOADING ZONES SHALL BE CONSTRUCTED AT 2% MAXIMUM SLOPE IN ALL DIRECTIONS

9. PEDESTRIAN SIDEWALK CONNECTIONS BETWEEN PUBLIC R.O.W. AND BUILDING ENTRANCES SHALL BE CONSTRUCTED AT AND 2% MAXIMUM CROSS SLOPE AND 5% MAXIMUM LONGITUDINAL SLOPE (8.33% FOR DESIGNATED RAMPS)

ALL WORK SHALL CONFORM TO THE CURRENT EDITIONS OF THE STATE PLUMBING AND BUILDING CODES WITH LOCAL AMENDMENTS AS APPLICABLE ALONG WITH ANY ADDITIONAL REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.

2. THE WORKING DRAWINGS ARE GENERALLY DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW REQUIRED FOR INSTALLATION IN THE SPACE PROVIDED. THEY DO NOT SHOW EVERY DIMENSION, COMPONENT PIECE, SECTION, JOINT OR FITTING REQUIRED TO COMPLETE THE PROJECT. ALL LOCATIONS FOR WORK SHALL BE CHECKED AND COORDINATED WITH EXISTING CONDITIONS IN THE FIELD BEFORE BEGINNING CONSTRUCTION. EXISTING UNDERGROUND UTILITIES WITHIN THE LIMITS OF EXCAVATION SHALL BE VERIFIED AS TO CONDITION, SIZE AND LOCATION BY UNCOVERING (POTHOLING), PROVIDING SUCH IS PERMITTED BY THE AUTHORITIES HAVING JURISDICTION, BEFORE BEGINNING CONSTRUCTION CONTRACTOR TO NOTIFY ENGINEER IF THERE ARE ANY DISCREPANCIES.

3. NOT ALL REQUIRED CLEANOUTS ARE SHOWN ON THE PLANS. PROVIDE CLEANOUTS AS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND THE CURRENT EDITION OF THE STATE PLUMBING CODE (E.G. UNIFORM PLUMBING CODE CHAPTER 7, SECTIONS 707 AND 719, AND CHAPTER 11, SECTION 1101.13)

4. ALL SANITARY AND STORM PIPING IS DESIGNED USING CONCENTRIC PIPE TO PIPE AND WYE FITTINGS, UNLESS OTHERWISE NOTED

ALL DOWNSPOUT LEADERS TO BE 6 INCHES AT 2.0% MINIMUM UNLESS NOTED OTHERWISE 6. IF APPLICABLE, PROVIDE 2 INCH PVC DRAIN LINE FROM DOMESTIC WATER METER VAULT AND BACKFLOW PREVENTER VAULT TO THE DOUBLE DETECTOR CHECK VALVE (FIRE) VAULT. PROVIDE 1/3 HP SUMP PUMP AT BASE OF FIRE VAULT AND INSTALL 2 INCH PVC DRAIN LINE WITH BACKFLOW VALVE FROM SUMP PUMP TO DAYLIGHT AT NEAREST CURB. FURNISH 3/4 INCH DIAMETER CONDUIT FROM BUILDING ELECTRICAL ROOM TO FIRE VAULT FOR SUMP PUMP ELECTRICAL SERVICE. NOTE: COORDINATE WITH FIRE PROTECTION CONTRACTOR FOR FLOW SENSOR INSTALLATION AND CONDUIT REQUIREMENTS

PREFABRICATED PLUMBING PRODUCTS USED SHALL BE LISTED ON THE IAPMO R&T PRODUCT LISTING DIRECTORY (pld.iapmo.org). ALL SUBMITTALS FOR REVIEW SHALL BE ACCOMPANIED BY MANUFACTURER'S LITERATURE CLEARLY STATING THIS CERTIFICATION AND/OR THE PRODUCT LISTING CERTIFICATE FROM THE IAPMO DIRECTORY WEBSITE

- 8. IF APPLICABLE, CONTRACTOR TO PROVIDE POWER TO IRRIGATION CONTROLLER. SEE LANDSCAPE PLANS AND SPECIFICATIONS
- SEE BUILDING PLUMBING DRAWINGS FOR PIPING WITHIN THE BUILDING AND UP TO 5 FEET OUTSIDE THE BUILDING, INCLUDING ANY FOUNDATION DRAINAGE PIPING
- 10. CONTRACTOR TO MAINTAIN MINIMUM 3 FEET OF COVER OVER ALL UTILITY PIPING AND CONDUITS, UNLESS NOTED OTHERWISE
- 11. WHERE CONNECTING TO AN EXISTING PIPE, AND PRIOR TO ORDERING MATERIALS, THE CONTRACTOR SHALL EXPOSE THE END OF THE EXISTING PIPE TO VERIFY THE LOCATION, SIZE, AND ELEVATION. NOTIFY ENGINEER OF ANY DISCREPANCIES
- 12. CONTRACTOR SHALL SCOPE ALL PRIVATE ONSITE GRAVITY SYSTEM LINES THAT ARE BEING CONNECTED TO FOR PROPOSED SERVICE. SCOPING SHALL OCCUR A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES WITH AS-BUILT RECORDS/SURVEY FINDINGS OR IF THE EXISTING UTILITIES ARE DAMAGED OR SHOW SIGNS OF SIGNIFICANT DETERIORATION. CONTRACTOR SHALL PROVIDE THE ENGINEER WITH VIDEO RECORDS, ALONG WITH A SKETCH IF THE LOCATIONS DIFFER FROM AS-BUILT PLANS OR SURVEY FINDINGS
- 13. PRODUCT MATERIAL SUBMITTALS FOR REVIEW BY THE ENGINEER SHALL BE ACCOMPANIED BY A MANUFACTURER'S CERTIFICATION THAT THE PRODUCT IS CAPABLE OF MEETING PERFORMANCE EXPECTATIONS (I.E. - WATERTIGHT, MINIMUM/MAXIMUM BURIAL, PREVENTION OF GROUNDWATER INTRUSION, ETC.) BASED ON THEIR REVIEW OF THE PROJECT PLANS. IN THE ABSENCE OF A MANUFACTURER'S CERTIFICATION, THE GENERAL CONTRACTOR'S REVIEW STAMP SHALL CONSTITUTE THAT THEY HAVE PERFORMED THE NECESSARY REVIEW TO CERTIFY THE PRODUCT'S CONFORMANCE TO PROJECT SPECIFICATIONS AND GENERAL EXPECTATIONS
- 14. PIPE LENGTHS SHOWN ON PLANS ARE TWO DIMENSIONAL AND MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE
- 15. MANHOLE RIM ELEVATIONS SHOWN ON PLANS REFERENCE THE CENTER OF THE STRUCTURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECONCILING LIDS/GRATES/ETC TO THE SLOPES OF THE SITE GRADING
- 16. MANHOLE OR VAULT RIM ELEVATIONS SHALL BE SET FLUSH IN PAVEMENT AREAS AND 3-4 INCHES ABOVE GRADE IN LANDSCAPE AREAS. RIMS IN PAVEMENT AREAS SHALL BE H-20 TRAFFIC RATED

SITE WORK NOTES

- 1. ALL CURB RADII TO BE 3 FEET UNLESS NOTED OTHERWISE
- 2. STAIR RISERS AND TREADS SHALL BE CONFORMANT WITH THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION AND THE CURRENT EDITION OF THE STATE BUILDING CODE (E.G. INTERNATIONAL BUILDING CODE, CHAPTER 10, SECTION 1011.5)
- WHEREVER A PEDESTRIAN WALKING PATH IS WITHIN 36 INCHES OF A VERTICAL DROP OF 30 INCHES OR GREATER, GUARDRAIL SHALL BE INSTALLED CONFORMANT WITH THE REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION AND THE CURRENT EDITION OF THE STATE BUILDING CODE (E.G. INTERNATIONAL BUILDING CODE, CHAPTER 10, SECTION 1015)

| END SEE SHEET R2.0 FOR PU | BLIC WATER FACILITY LEGEND | |
|---------------------------|----------------------------|---------------------|
| | EXISTING | PROPOSED |
| DW LINE | | |
| OF GRADING DESIGN | - | · · |
| RLINE | | |
| I DRAIN CHANNEL EASEMENT | | |
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| RY SEWER LINE | SSSS | |
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| CONTROL MANHOLE | | Θ |
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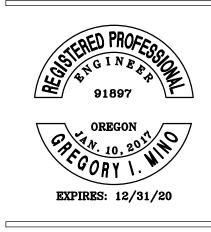
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Project





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| REVISION SCHEDULE | | | |
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| Delta | Issued As | Issue Date | |
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SHEET TITLE: CONSTRUCTION **NOTES & SPECIFICATIONS** ABBREVIATIONS AND LEGEND

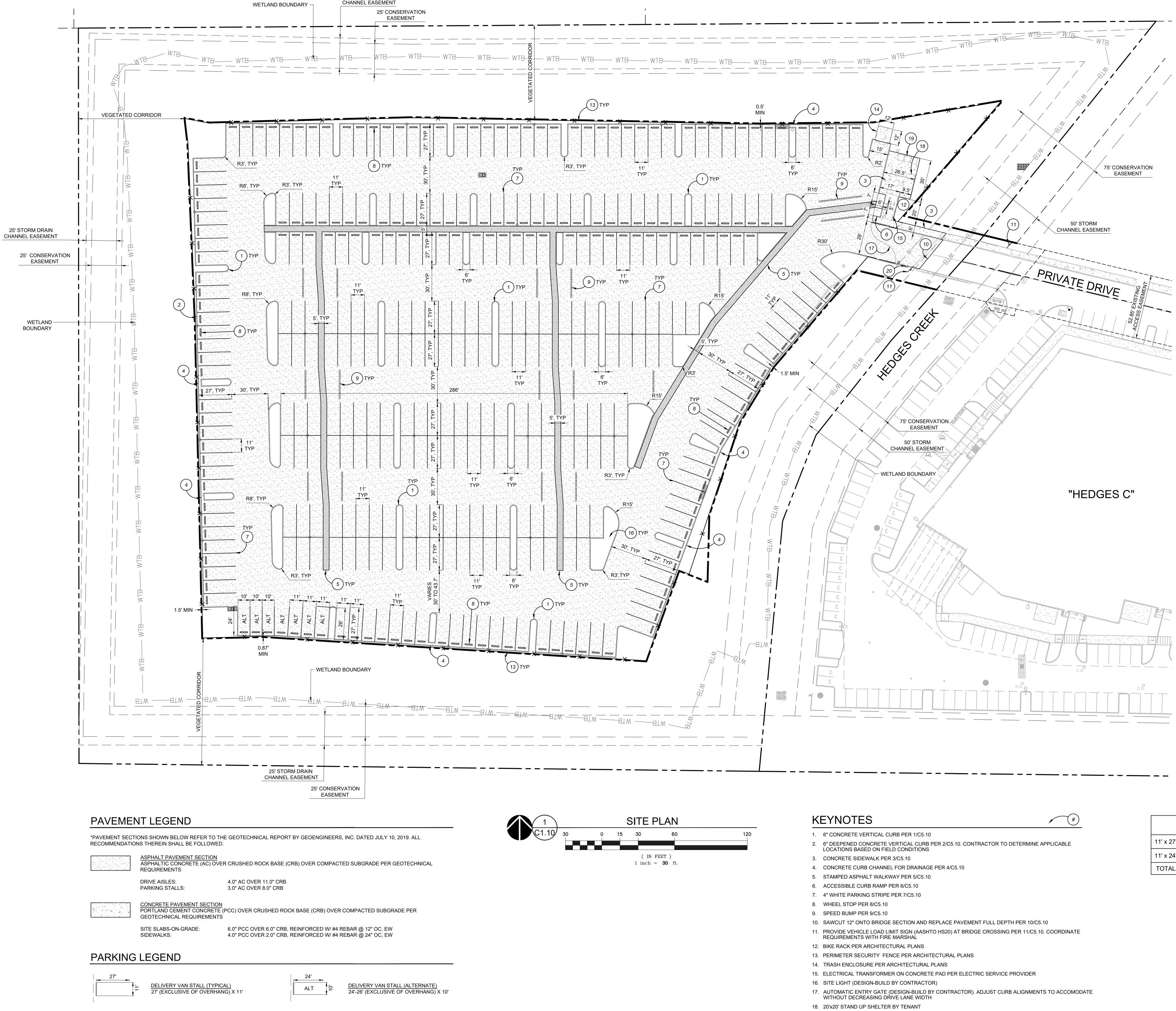
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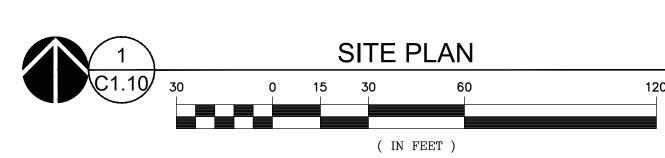
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25' STORM DRAIN CHANNEL EASEMENT

- 19. PORTABLE TOILET BY TENANT
- 20. ADJUST CURB ALIGNMENT TO ACCOMMODATE EXISTING GAS VALVE

PARKING TABULATIONS 11' x 27' DELIVERY VAN STALLS 342 11' x 24' DELIVERY VAN STALLS TOTAL DELIVERY VAN STALLS 349

ARCHITECTURAL REVIEW SUBMITTAL 09/01/20



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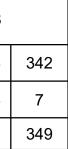
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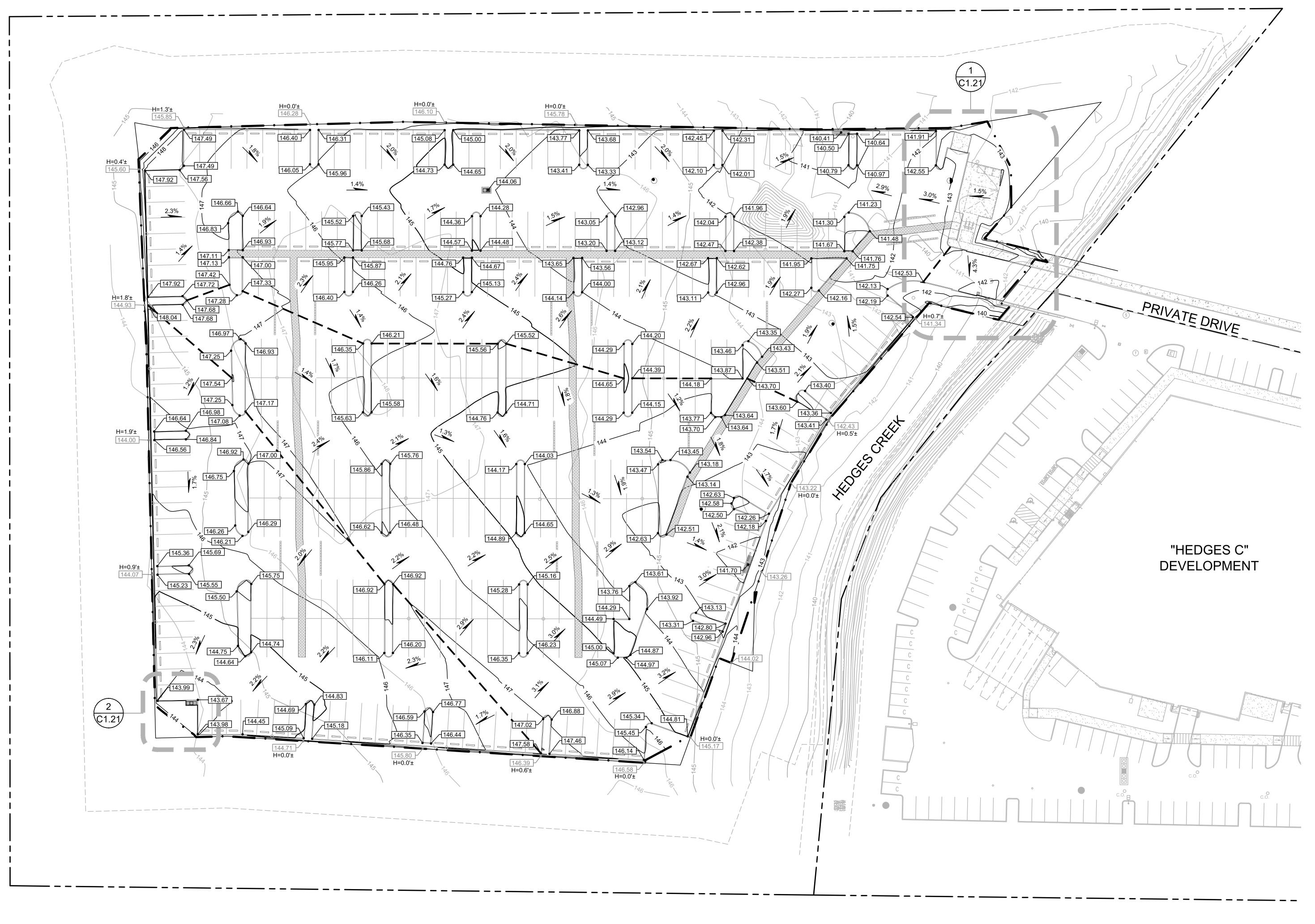
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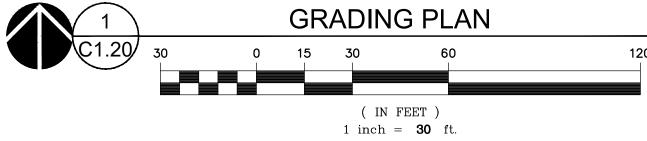






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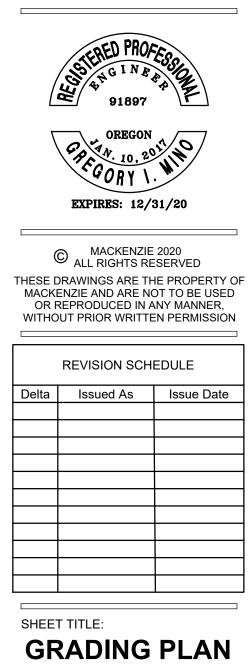
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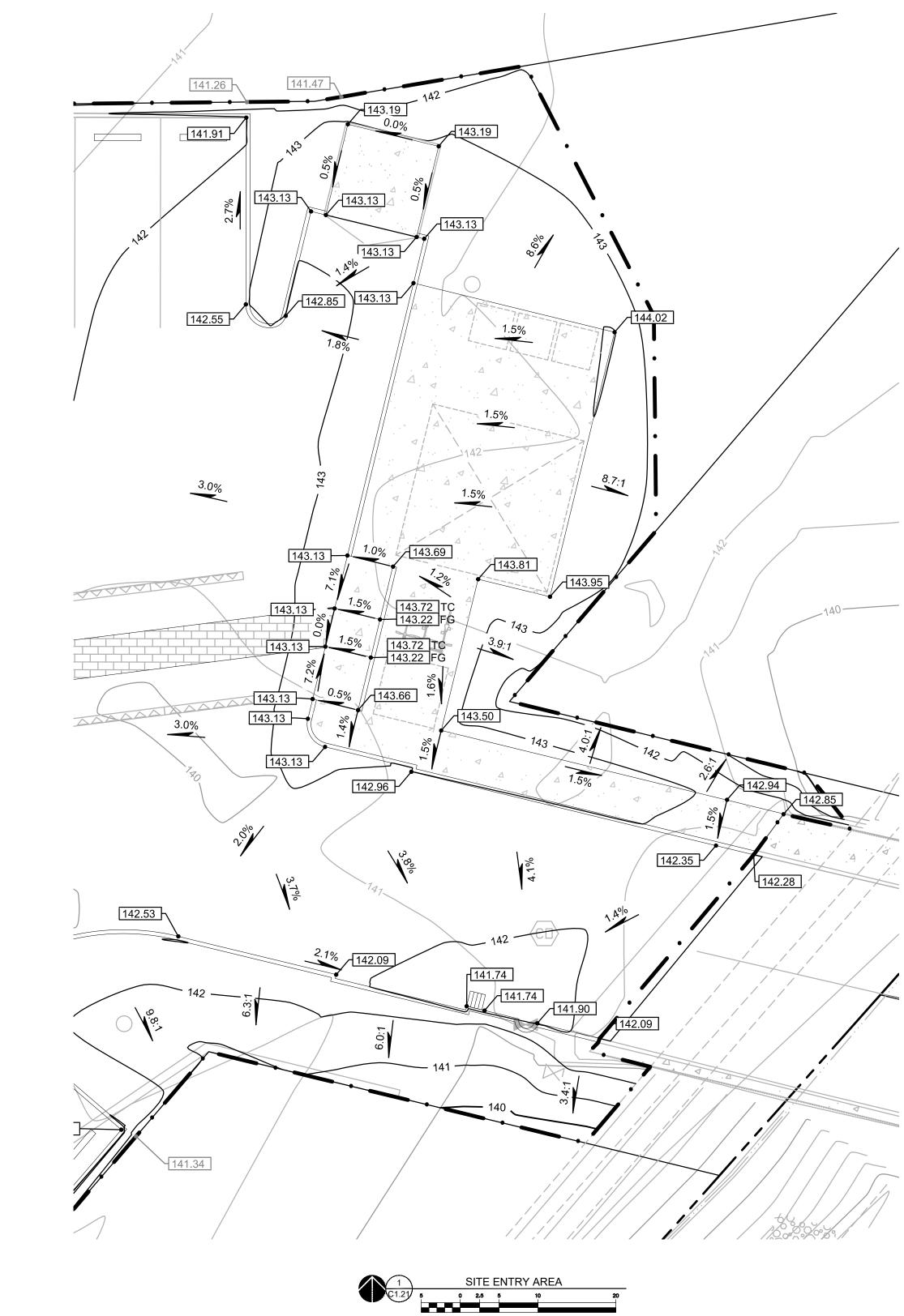
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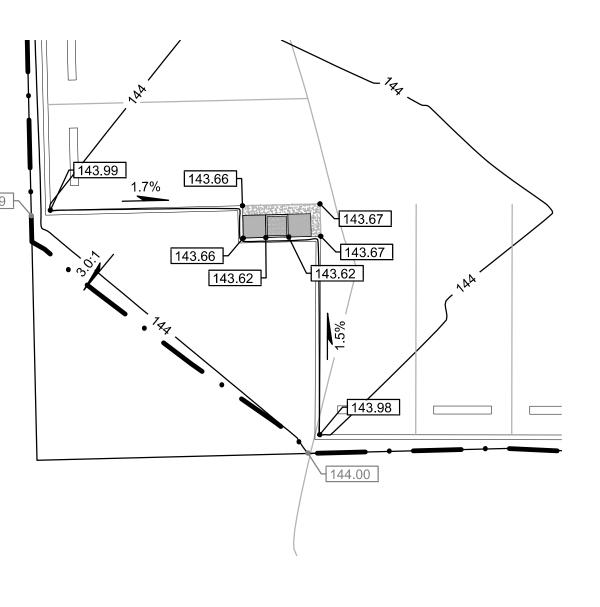


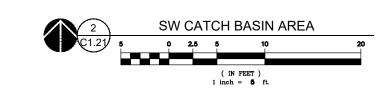
THE SURVEY INFORMATION SHOWN AS A BACKGROUND SCREEN ON THIS SHEET IS SHOWN FOR REFERENCE ONLY AND IS BASED ON A SURVEY BY: WEDDLE SURVEYING DATE: 10/21/2019



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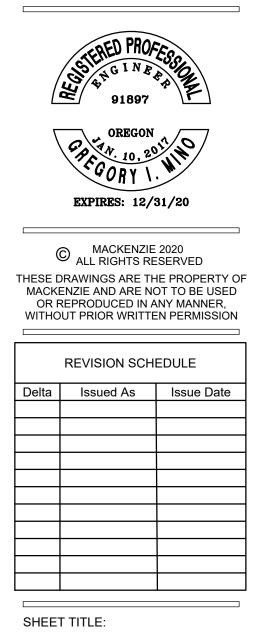
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HEDGES D PARKING LOT 11507 SW AMU STREET TUALATIN, OREGON



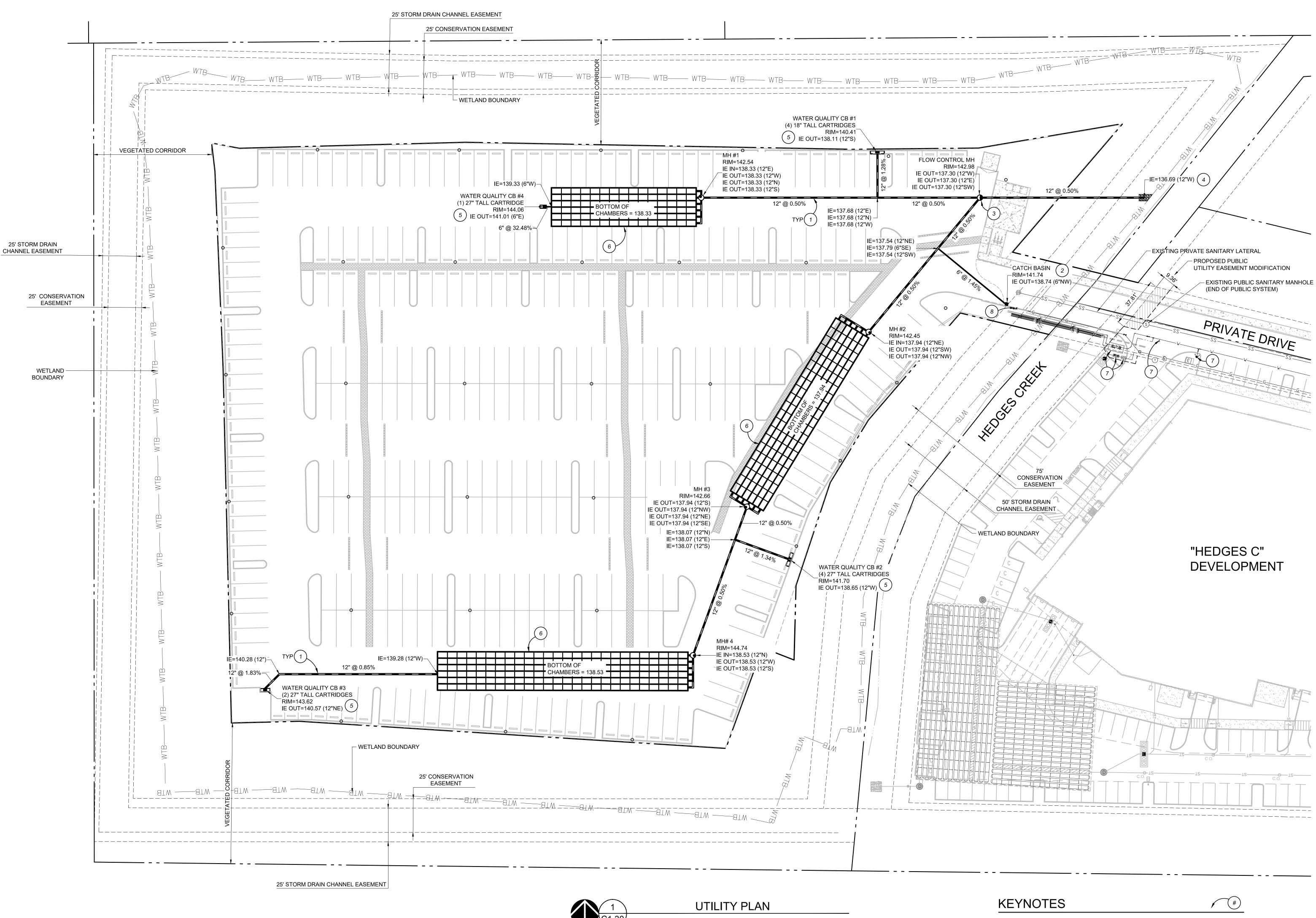
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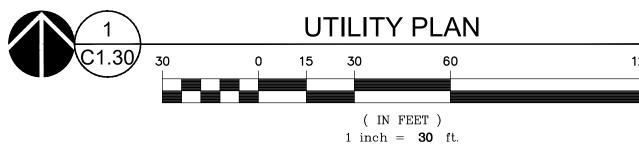
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1. INSTALL STORM PIPE, SIZE PER PLAN, TRENCHING PER 12/C5.10 AND PROJECT

- SPECIFICATIONS 2. INSTALL CATCH BASIN PER 13/C5.10
- 3. INSTALL FLOW CONTROL MANHOLE PER 1-1B/C5.11
- 4. INSTALL PIPE OUTFALL, PROVIDE CLASS 50 RIP RAP PAD PER 2/C5.11
- 5. INSTALL WATER QUALITY CATCH BASIN (# CARTRIDGES AS NOTED) PER SAMPLE CUT SHEET ON C5.11
- 6. INSTALL UNDERGROUND DETENTION SYSTEM (372 CHAMBERS TOTAL, 6" STONE ENCASEMENT) WITH 12" HEADER SYSTEM AND CONNECTOR MANHOLES PER SAMPLE CUT SHEET ON C5.11
- 7. REFER TO SHEETS R2.0 AND R3.0 FOR PUBLIC WATER FACILITY CONSTRUCTION
- 8. ADJUST EXISTING GAS VALVE TO GRADE



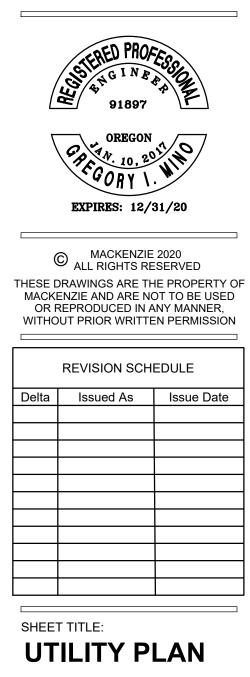
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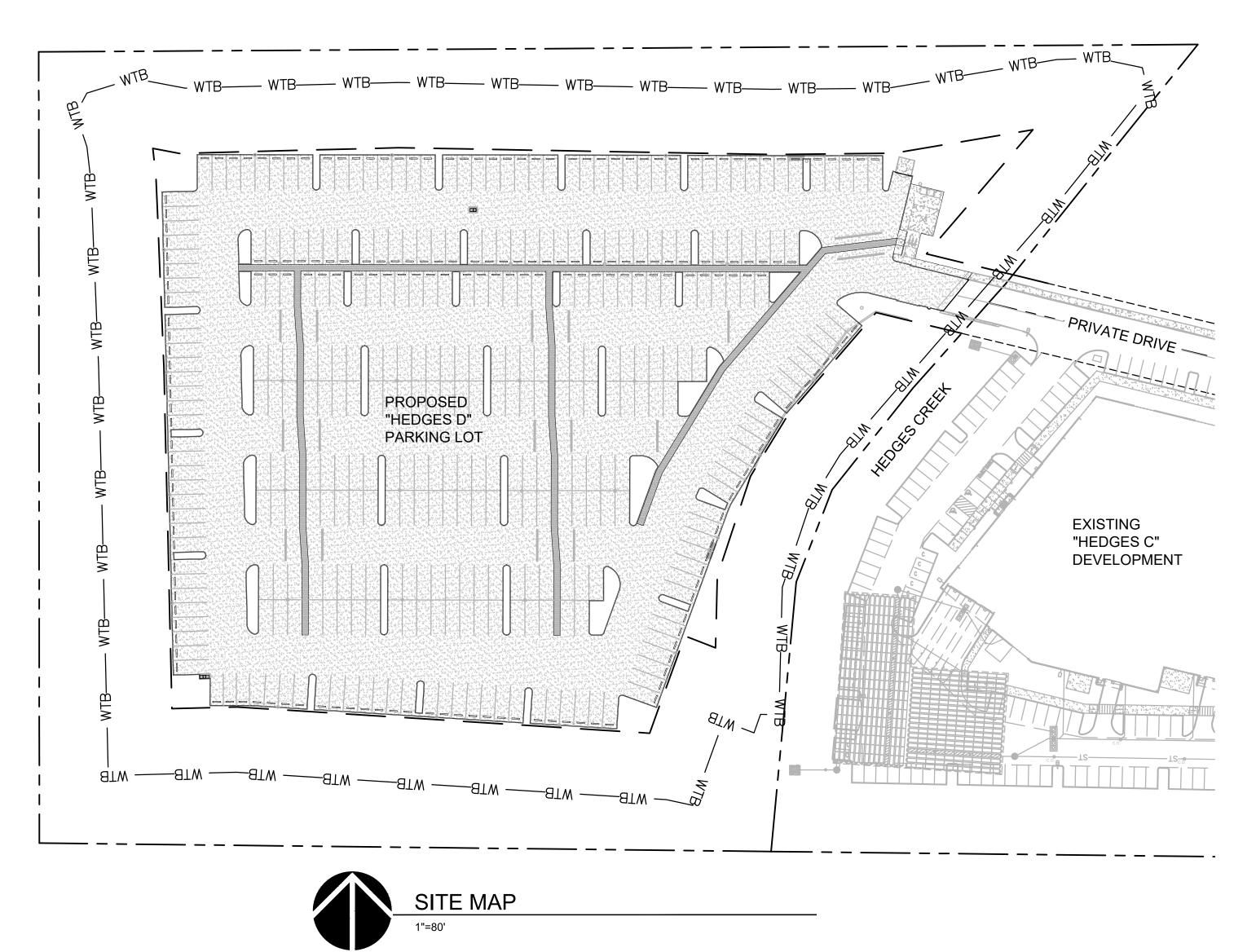
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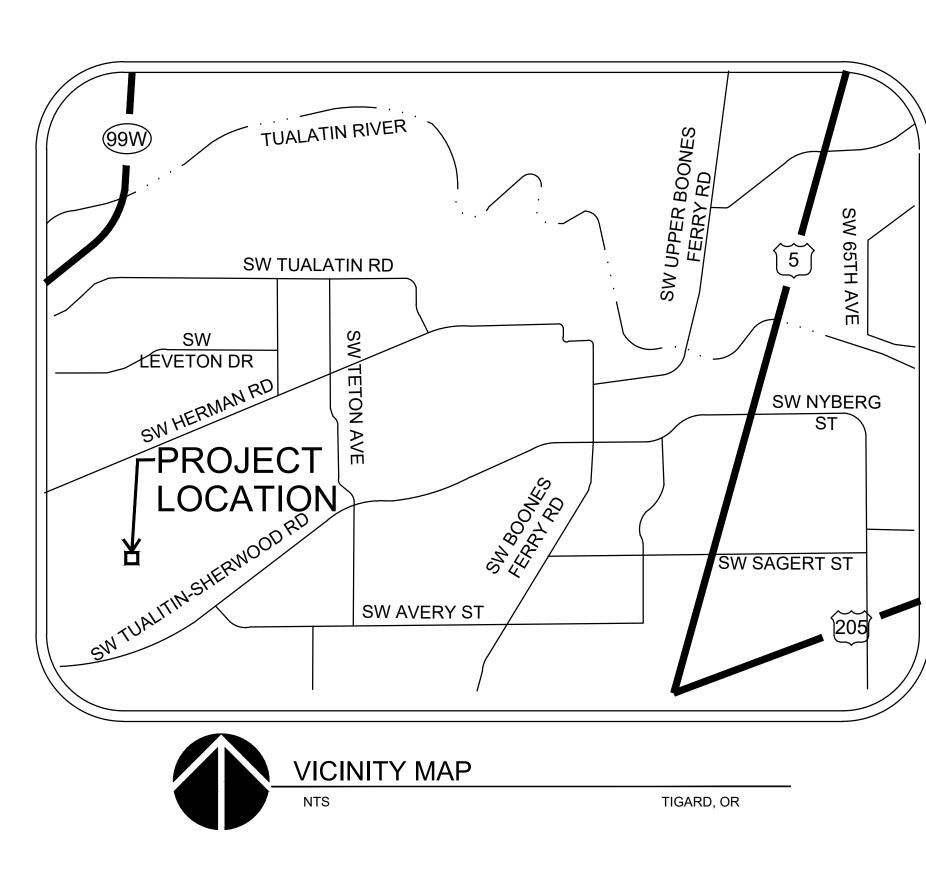
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"HEDGES D" EROSION AND SEDIMENT CONTROL PLAN (1200-CN)

TUALATIN, OR

TAX LOTS 100, 800, 1100 2S101CA00100, 2S101CA00800,2S1010001100 WASHINGTON COUNTY, OREGON

STANDARD EROSION AND SEDIMENT CONTROL PLAN DRAWING NOTES: "SCHEDULE" NOTATIONS REFER TO D.E.Q. GENERAL PERMIT LANGUAGE

- ALL PERMIT REGISTRANTS MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT
- 2. THE ESCP MEASURES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE MEASURES AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS.
- SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISION TO DEQ OR AGENT PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL T
- PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. IDENTIFY, MARK, AND PROTECT (BY FENCING OFF OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO
- BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE
- AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. EROSION AND SEDIMENT CONTROL MEASURES INCLUDING PERIMETER SEDIMENT CONTROL MUST BE IN PLACE BEFORE VEGETATION IS
- DISTURBED AND MUST REMAIN IN PLACE AND BE MAINTAINED, REPAIRED. AND PROMPTLY IMPLEMENTED FOLLOWING PROCEDURES ESTABLISHED FOR THE DURATION OF CONSTRUCTION. INCLUDING PROTECTION FOR ACTIVE STORM DRAIN INLETS AND CATCH BASINS AND APPROPRIATE NON-STORMWATER POLLUTION CONTROLS.
- 8. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. DIRECT ALL WASH WATER INTO A PIT OR LEAK-PROOF CONTAINER. HANDLE WASH WATER AS WASTE. CONCRETE DISCHARGE TO WATERS OF THE STATE IS PROHIBITED.
- 9. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES AND FOR ALL ROADWAYS INCLUDING GRAVEL ROADWAYS.
- 10. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. 11. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS
- USING BMPS SUCH AS: GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES.
- 12. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. 13. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, LEFTOVER PAINTS, SOLVENTS, AND
- GLUES FROM CONSTRUCTION OPERATIONS. 14. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING

PROPERTY DESCRIPTION: CITY OF TUALATIN DOWN A PRIVATE DRIVE WEST FROM SW AMU STREET AND SW 115TH STREET

PROJECT LOCATION:

11507 SW AMU STREET TUALATIN, OREGON

LATITUDE = 45°22'28" LONGITUDE = -122°47'57"

ATTENTION EXCAVATORS:

OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 503-232-1987. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL 503-246-6699.

GENERAL NOTE:

THIS PLAN SHOWS THE MINIMUM SUGGESTED LEVEL OF EROSION AND SEDIMENT CONTROL PROTECTION REQUIRED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO IMPLEMENT ADDITIONAL MEASURES AS NECESSARY TO COMPLY WITH ALL PERMITS, LOCAL, AND STATE REQUIREMENTS.

DEVELOPER

MARTIN DEVELOPMENT 98115 PO BOX 15523 SEATTLE, WA CONTACT: MAC MARTIN PHONE: (206) 399-6676 macmartinis@gmail.com

SURVEYOR

WEDDLE SURVEYING INC. CONTACT: ANTHONY RYAN 6950 SW HAMPTON ST., STE. 170 TIGARD, OR 97223 PHONE:503-941-9585 office@weddlesurveying.com

CIVIL ENGINEER MACKENZIE CONTACT: GREG MINO 1515 SE WATER AVE PORTLAND, OR 97214 PHONE: 503-224-9560 gmino@mcknze.com

SUPPLIES.

- 15. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL.
- WATERWAY RIPARIAN ZONE
- MANUFACTURER'S SPECIFICATIONS TO SURFACE WATERS.
- 19. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND
- REMOVAL 21. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT
- BEFORE BMP REMOVAL. 22. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN
- TO THE OREGON DIVISION OF STATE LANDS REQUIRED TIMEFRAME.
- RETAINED BY TEMPORARY BMPS.
- SEDIMENT CONTROL BMP I.E. (FILTER BAG).

BMPS

PERIOD, OCTOBER 01 - MAY 31

EXISTING SITE CONDITIONS

LOT BOUNDARY)

DEVELOPED CONDITIONS *DELIVERY VAN PARKING LOT

TIME TABLE

* MASS GRADING * UTILITY INSTALLATION * SITE CONSTRUCTION * FINAL STABILIZATION

TOTAL SITE AREA = 217.682 SF (5.00 AC)

SITE SOIL CLASSIFICATION: (FROM USGS)

27 - LABISH MUCKY CLAY 43 - WAPATO SILTY CLAY LOAM

RECEIVING WATER BODIES NEAREST WATER BODY: HEDGES CREEK

COMPANY/AGENCY: PERLO CONSTRUCTION INSPECTOR: TIM KOFSTAD

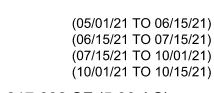
AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND

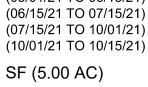
- 16. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY
- 17. IF A STORMWATER TREATMENT SYSTEM (FOR EXAMPLE ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED. SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE.
- DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO
- 18. AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING
- CREATION OF BARE GROUND DURING WET WEATHER OCTOBER 01 MAY 20. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES
- ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE
- BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT. AND
- REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. 23. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING
- 24. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. 25. PROVIDE PERMANENT EROSION CONTROL MEASURES ON ALL EXPOSED AREAS. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS
- IS ESTABLISHED. HOWEVER. DO REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AS EXPOSED AREAS BECOME STABILIZED, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. PROPERLY DISPOSE OF CONSTRUCTION MATERIALS AND WASTE, INCLUDING SEDIMENT
- 26. IF VEGETATIVE SEED MIXES ARE SPECIFIED, SEEDING MUST TAKE PLACE NO LATER THAT SEPTEMBER 1; THE TYPE AND PERCENTAGES OF SEED IN THE MIX MUST BE IDENTIFIED ON THE PLANS. 27. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE DISCHARGED OVER AN UNDISTURBED, PREFERABLY VEGETATED AREA, AND THROUGH A
- 28. ALL EXPOSED SOILS MUST BE COVERED DURING THE WET WEATHER 29. IF WATER OF THE STATE IS WITHIN THE PROJECT SITE OR WITHIN 50 FEET OF THE PROJECT BOUNDARY, MAINTAIN THE EXISTING NATURAL BUFFER WITHIN THE 50-FOOT ZONE FOR THE DURATION OF THE PERMIT
- COVERAGE, OR MAINTAIN LESS THAN THE ENTIRE EXISTING NATURAL BUFFER AND PROVIDE ADDITIONAL EROSION AND SEDIMENT CONTROL

NARRATIVE DESCRIPTIONS

* UNDEVELOPED LAND WITH WETLANDS (UNDISTURBED, OUTSIDE OF

NATURE OF CONSTRUCTION ACTIVITY AND ESTIMATED





TOTAL DISTURBED AREA = 212,795 SF (4.89 AC)

37C - VERBOORT SILTY CLAY LOAM, 0 TO 3 PERCENT SLOPES

PERMITTEE'S SITE INSPECTOR

PHONE:(503) 701-8150 E-MAIL: TKOFSTAD@PERLO.BOZ EXPERIENCE: ID# ECO-3-5111804, EXP. 5/11/2021

INSPECTION FREQUENCY TABLE

| SITE CONDITION | MINIMUM FREQUENCY |
|--|---|
| 1. ACTIVE PERIOD | DAILY WHEN STORMWATER RUNOFF, INCLUDING RUNOFF FROM SNOWMELT, IS OCCURRING. AT LEAST ONCE EVERY FOURTEEN (14) DAYS, REGARDLESS OF WHETHER STORMWATER RUNOFF IS OCCURRING. |
| 2. PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY. | ONCE TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING ORDER. ANY NECESSARY MAINTENANCE AND REPAIR MUST BE MADE PRIOR TO LEAVING THE SITE. |
| 3. INACTIVE PERIODS GREATER THAN FOURTEEN (14) CONSECUTIVE CALENDAR DAYS. | ONCE EVERY MONTH. |
| 4. PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER. | IF PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT AND ACCESSIBLE DISCHARGE POINT OR DOWNSTREAM LOCATION. |
| 5. PERIODS DURING WHICH DISCHARGE IS UNLIKELY DUE TO FROZEN CONDITIONS. | MONTHLY. RESUME MONITORING IMMEDIATELY UPON MELT, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY. |

BMP MATRIX FOR CONSTRUCTION PHASES REFER TO DEQ GUIDANCE MANUAL FOR A COMPREHENSIVE LIST OF AVAILABLE BMP'S.

| | | MASS | UTILITY | STREET | FINAL | WET WEAT |
|------------------------------|----------|---------|--------------|--------------|---------------|--------------|
| | CLEARING | GRADING | INSTALLATION | CONSTRUCTION | STABILIZATION | (OCT. 1 - MA |
| EROSION PREVENTION | | | | | | , |
| PRESERVE NATURAL VEGETATION | ** X | х | Х | х | Х | х |
| GROUND COVER | | | | | Х | х |
| HYDRAULIC APPLICATIONS | | | | | | |
| PLASTIC SHEETING | | | | | | Х |
| MATTING | | | | | | |
| DUST CONTROL | X | Х | Х | Х | X | Х |
| TEMPORARY/ PERMANENT SEEDING | | Х | Х | Х | Х | Х |
| BUFFER ZONE | | | | | | |
| OTHER: | | | | | | |
| SEDIMENT CONTROL | | | | | | |
| SEDIMENT FENCE (PERIMETER) | ** X | Х | Х | Х | Х | Х |
| SEDIMENT FENCE (INTERIOR) | | | | | | |
| STRAW WATTLES | | | | | | |
| FILTER BERM | Х | Х | Х | Х | | |
| INLET PROTECTION | ** X | Х | Х | Х | X | Х |
| DEWATERING | | | | | | |
| SEDIMENT TRAP | | | | | | |
| NATURAL BUFFER ENCROACHMENT | | | | | | |
| OTHER: | | | | | | |
| RUN OFF CONTROL | | | | Х | Х | |
| CONSTRUCTION ENTRANCE | ** X | Х | Х | Х | X | |
| PIPE SLOPE DRAIN | | | | | | |
| OUTLET PROTECTION | Х | Х | Х | Х | Х | |
| SURFACE ROUGHENING | | | | | Х | |
| CHECK DAMS | | | | | | |
| OTHER: | | | | | | |
| POLLUTION PREVENTION | | | | | | |
| PROPER SIGNAGE | Х | Х | Х | Х | Х | Х |
| HAZ WASTE MGMT | Х | Х | Х | Х | X | Х |
| SPILL KIT ON-SITE | Х | Х | Х | Х | Х | Х |
| CONCRETE WASHOUT AREA | Х | Х | Х | Х | Х | Х |
| OTHER: | | | | | | |
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SIGNIFIES ADDITIONAL BMP'S REQUIRED FOR WORK WITHIN 50' OF WATER OF THE STATE. SIGNIFIES BMP THAT WILL BE INSTALLED PRIOR TO ANY GROUND DISTURBING ACTIVITY.

RATIONALE STATEMENT

A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEQ'S GUIDANCE MANUAL HAS BEEN REVIEWED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE ABOVE LISTED BMP'S WERE NOT CHOSEN BECAUSE THEY WERE DETERMINED TO NOT EFFECTIVELY MANAGE EROSION PREVENTION AND SEDIMENT CONTROL FOR THIS PROJECT BASED ON SPECIFIC SITE CONDITIONS, INCLUDING SOIL CONDITIONS TOPOGRAPHIC CONSTRAINTS, ACCESSIBILITY TO THE SITE, AND OTHER RELATED CONDITIONS, AS THE PROJECT PROGRESSES AND THERE IS A NEED TO REVISE THE ESCP PLAN, AN ACTION PLAN WILL BE SUBMITTED.

INITIAL

EROSION AND SEDIMENT CONTROL PLANS SHEET INDEX

C1.40 - EROSION AND SEDIMENT CONTROL PLAN COVER SHEET C1.41 - CLEARING, DEMOLITION, MASS GRADING EROSION AND SED CONTROL PLAN C1.42 - UTILITY & STREET CONSTRUCTION GRADING & STABILIZATION ESC PLAN

C1.43 - EROSION AND SEDIMENT CONTROL DETAILS

ARCHITECTURAL REVIEW SUBMITTAL 09/01/20



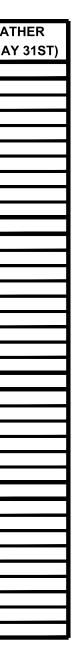
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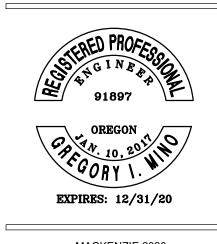
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SHEET TITLE: **EROSION AND** SEDIMENT **CONTROL PLAN COVER SHEET**

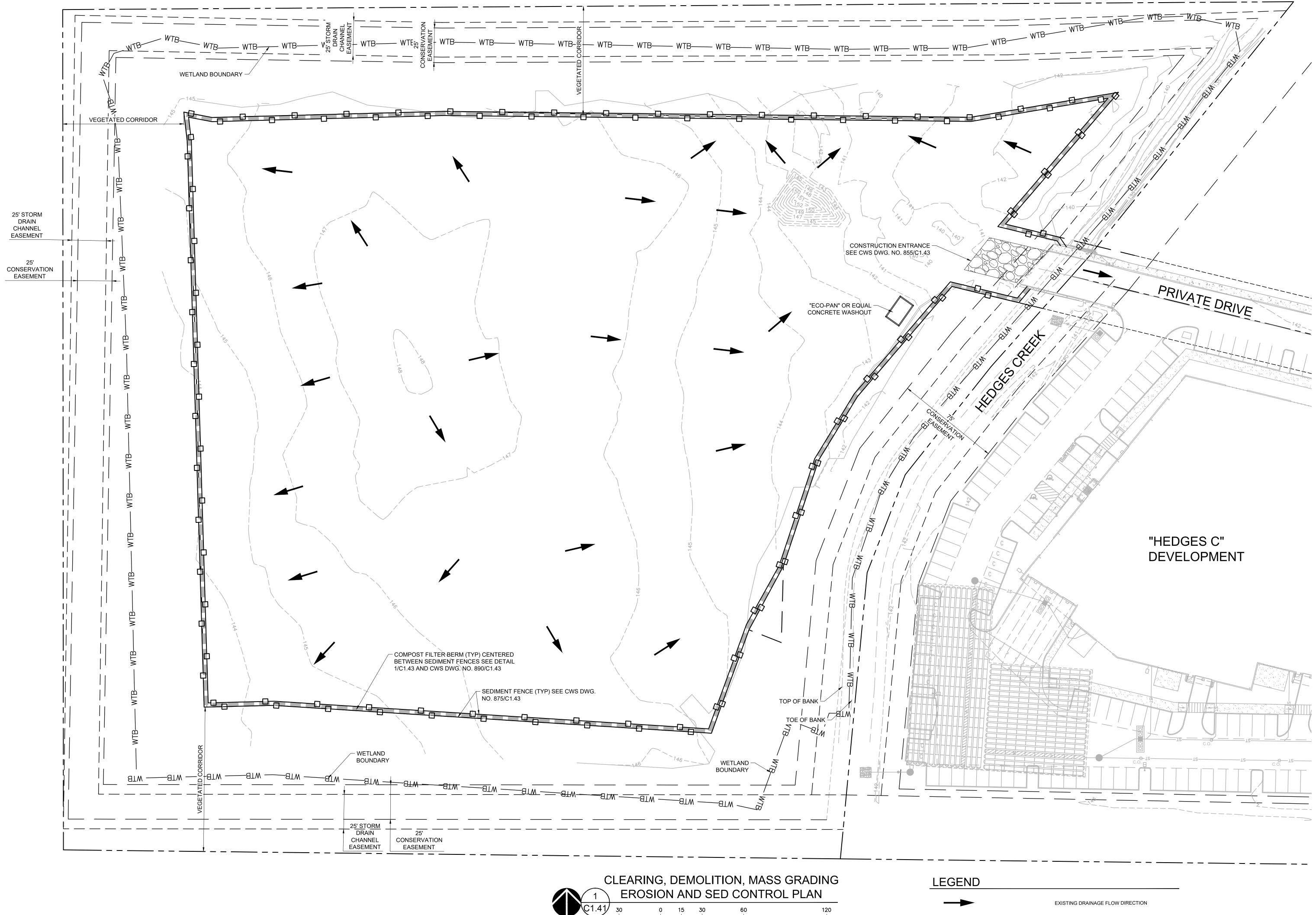
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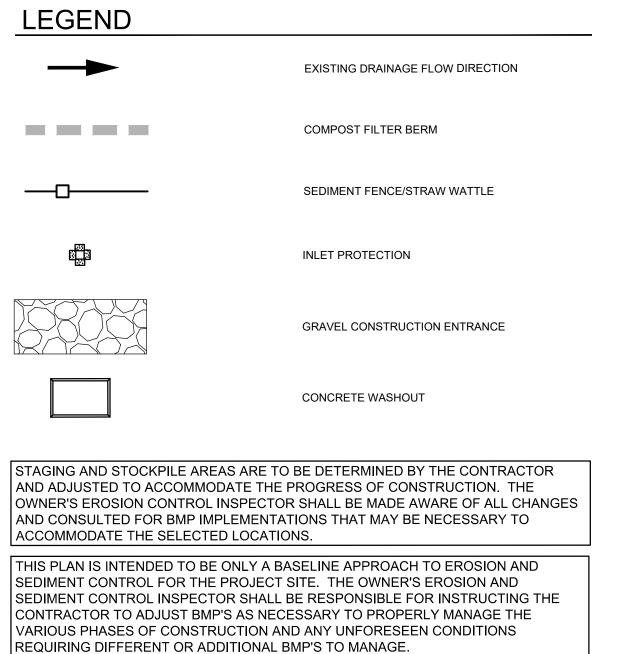
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SHEET



(IN FEET) 1 inch = **30** ft.



SEE SHEETS C1.43 FOR EROSION AND SEDIMENT CONTROL DETAILS



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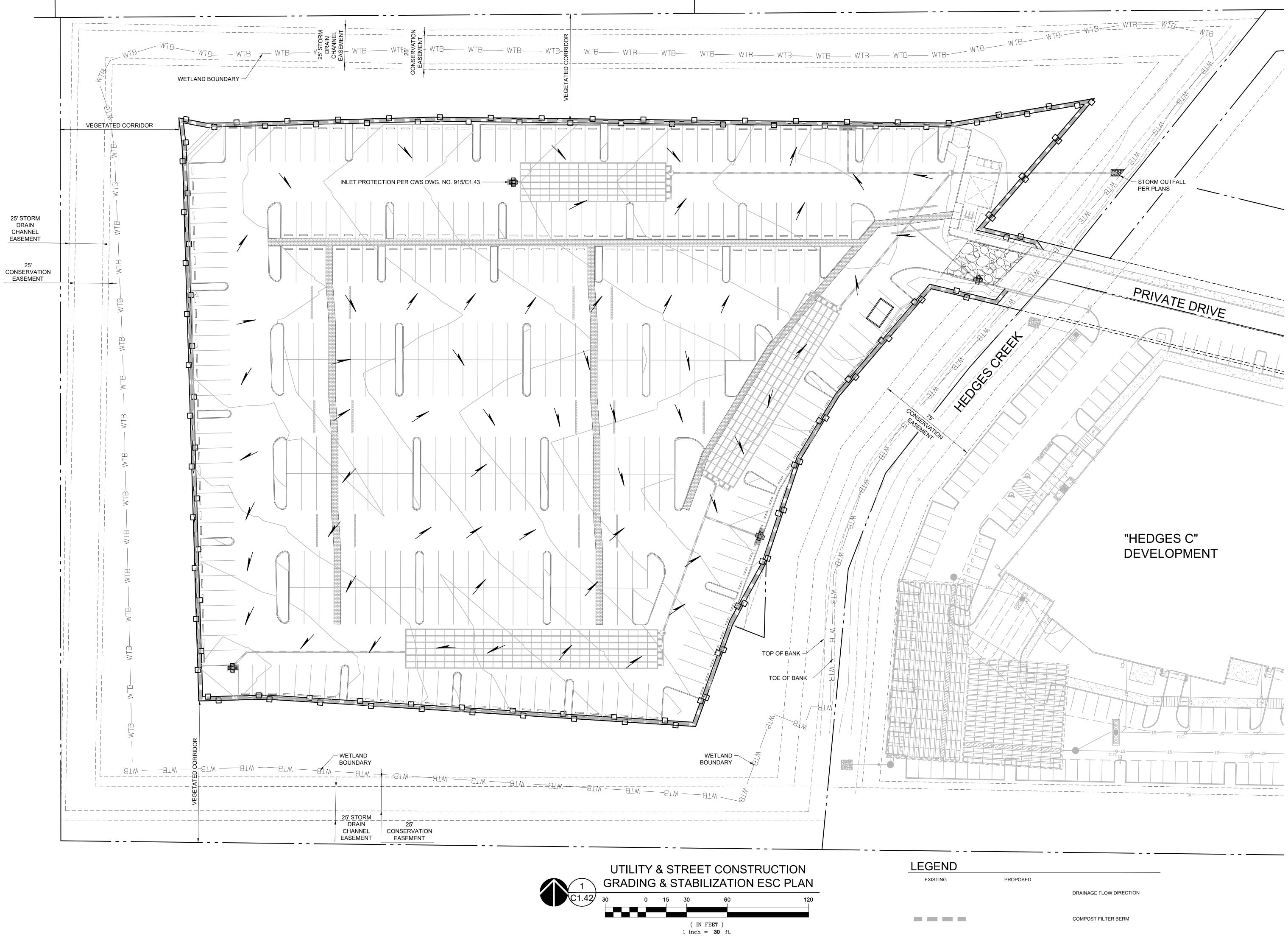
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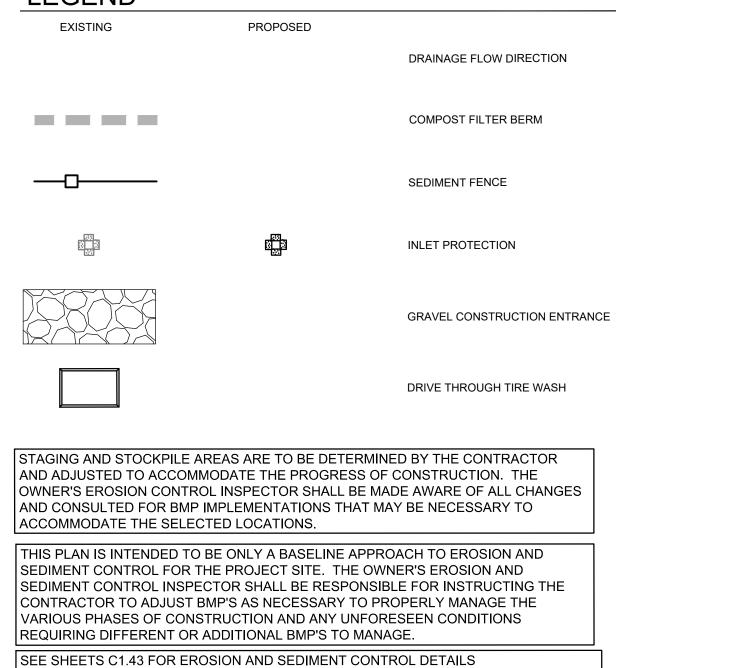
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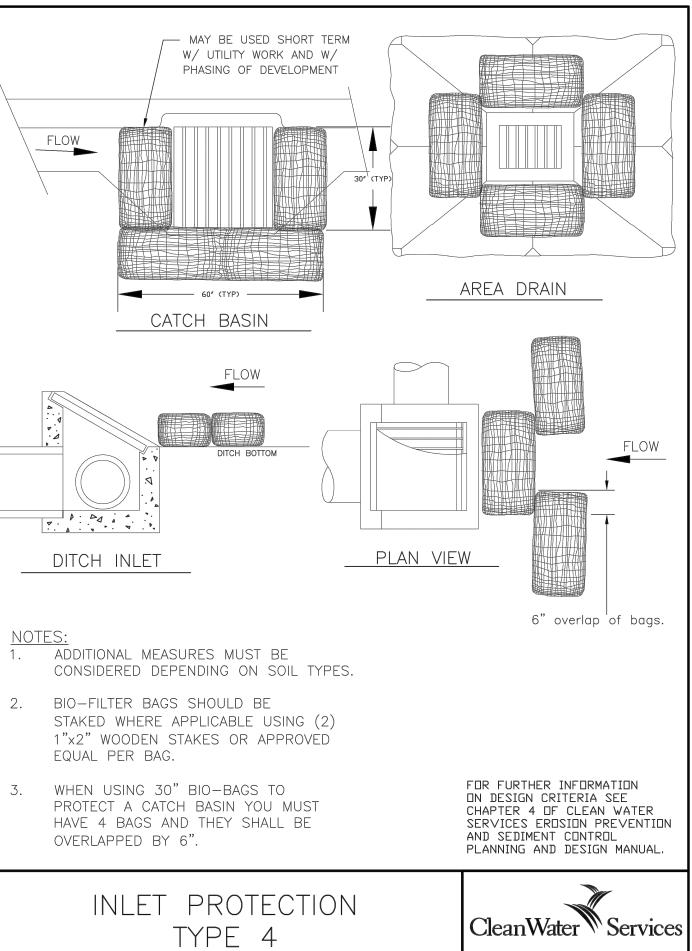
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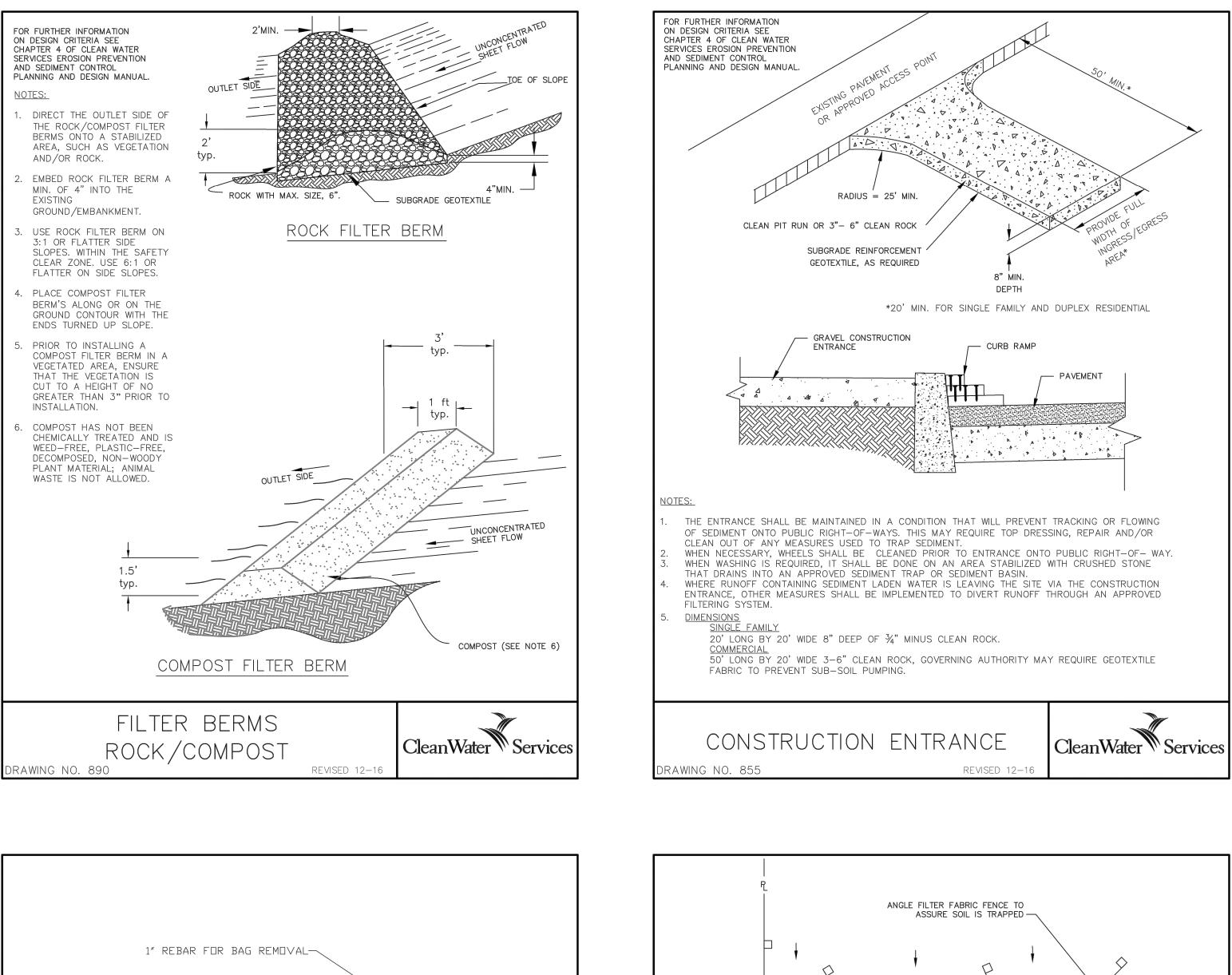


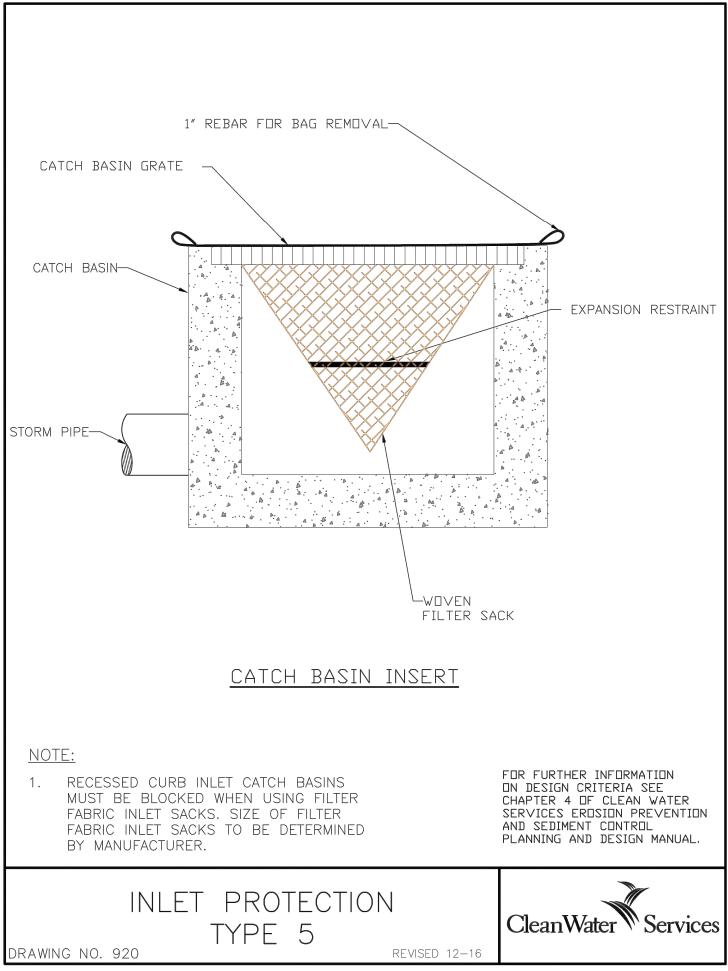
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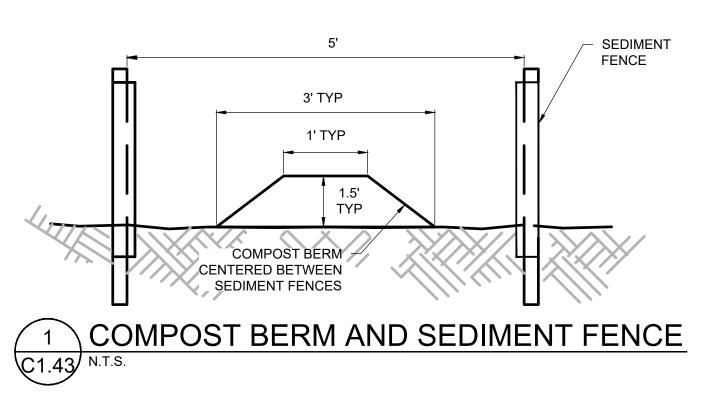
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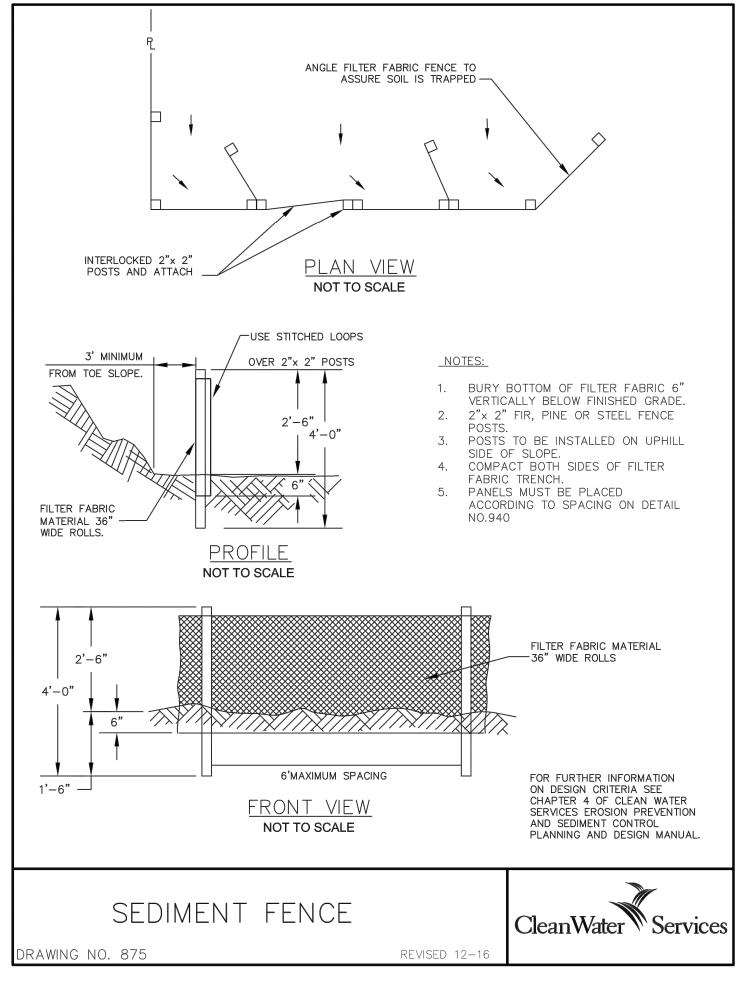


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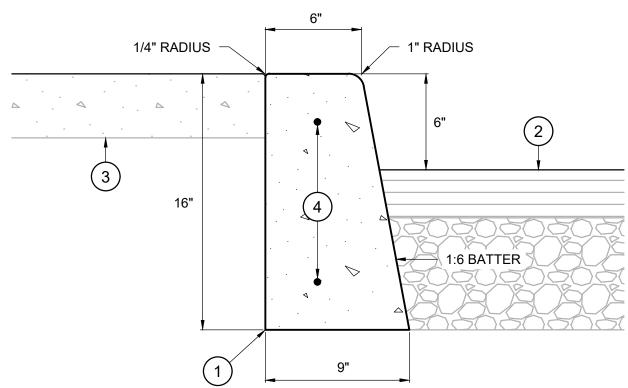
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SHEET TITLE: **EROSION AND** SEDIMENT CONTROL DETAILS

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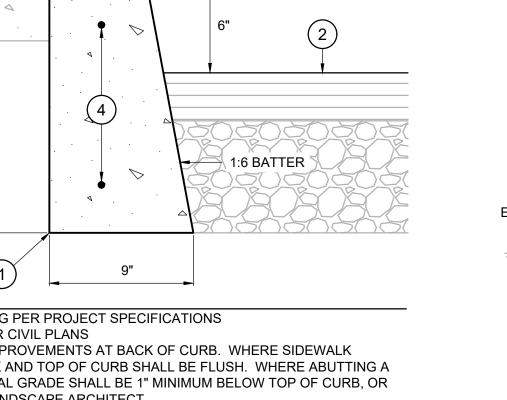


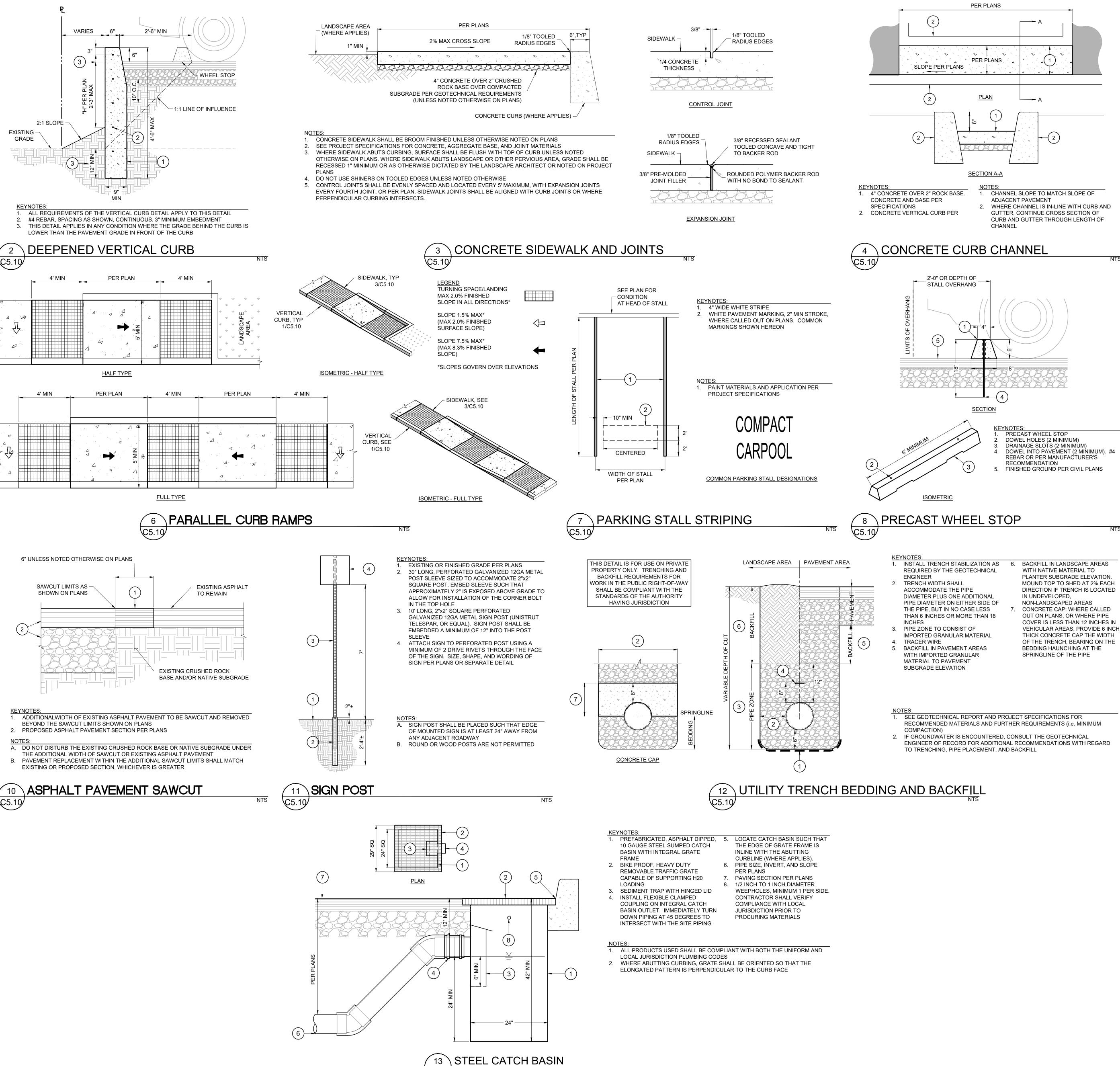
KEYNOTES: 1. CONCRETE FOR CURBING PER PROJECT SPECIFICATIONS PAVEMENT SECTION PER CIVIL PLANS 3. SEE CIVIL PLANS FOR IMPROVEMENTS AT BACK OF CURB. WHERE SIDEWALK OCCURS, THE SIDEWALK AND TOP OF CURB SHALL BE FLUSH. WHERE ABUTTING A PLANTER AREA, THE FINAL GRADE SHALL BE 1" MINIMUM BELOW TOP OF CURB, OR AS DIRECTED BY THE LANDSCAPE ARCHITECT

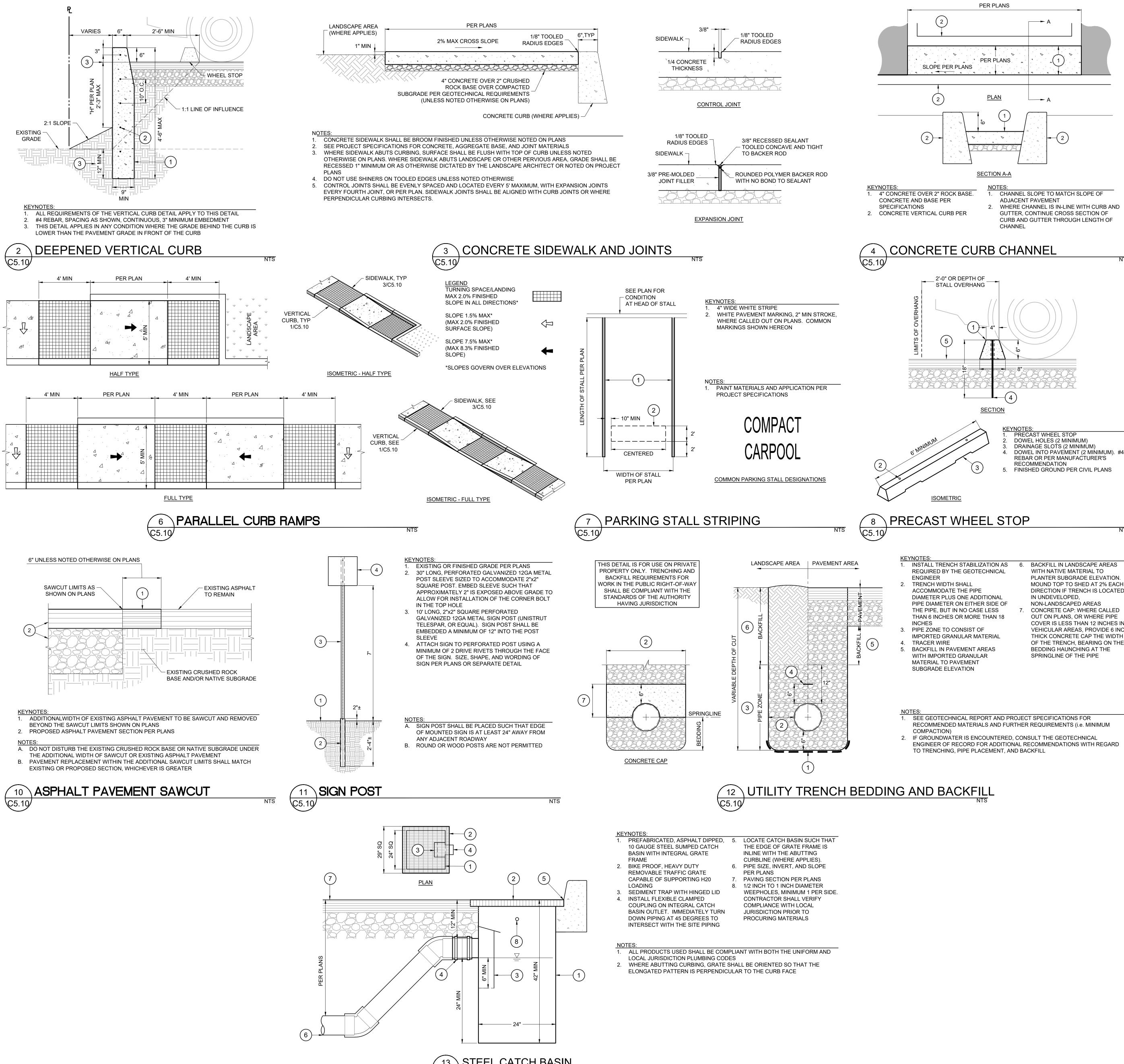
4. #4 REBAR, TOP AND BOTTOM, CONTINUOUS, 3" MINIMUM EMBEDMENT

1 VERTICAL CURB

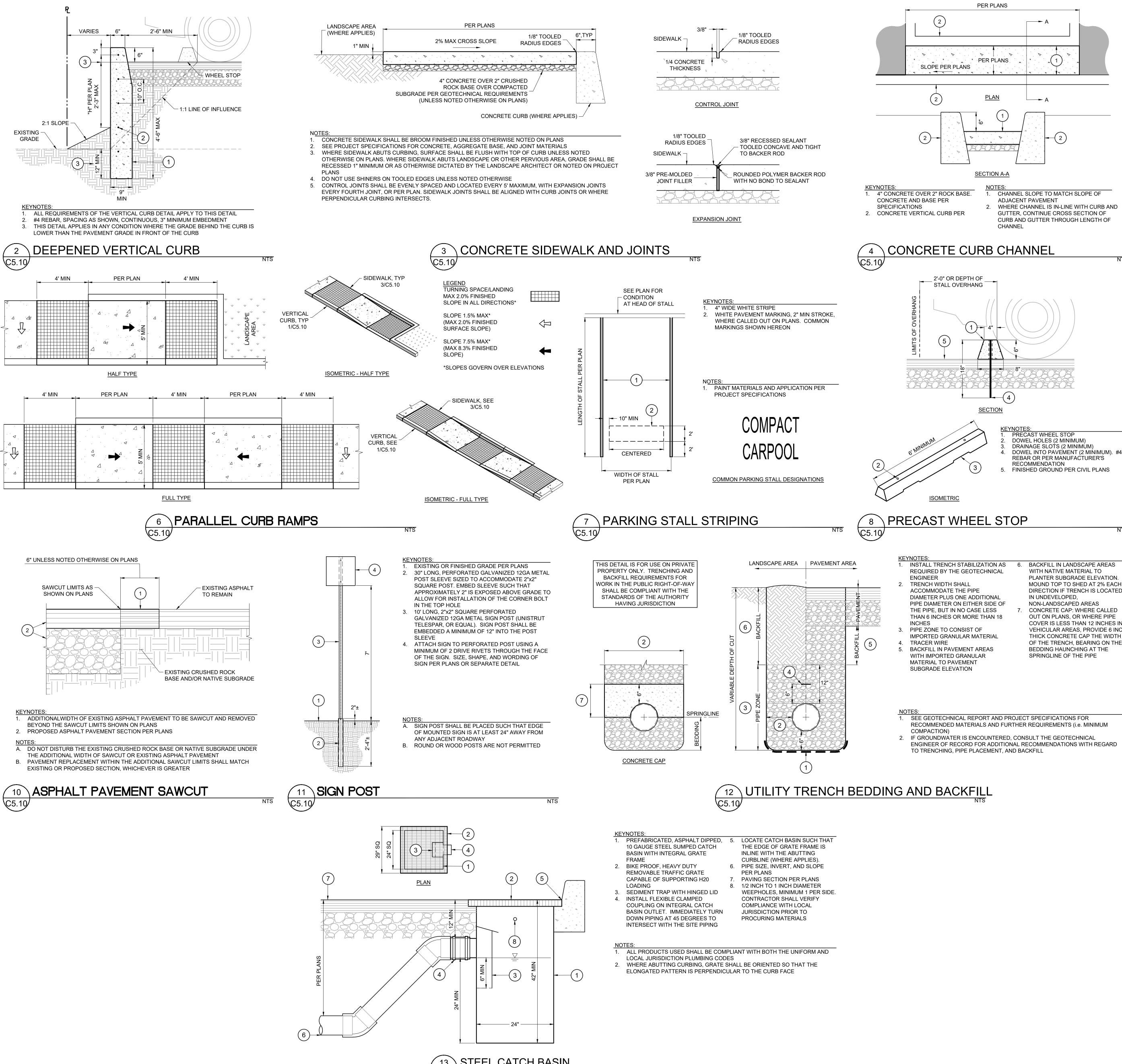
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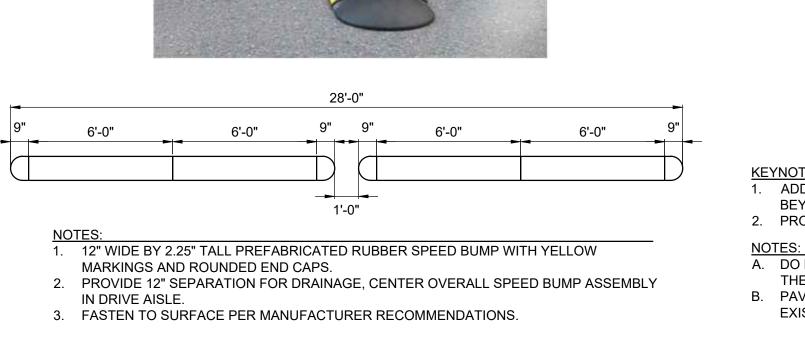
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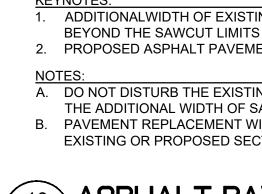


- NOTES: 1. CONTRACTOR TO PROVIDE MATERIAL SAMPLE, CUT SHEET, OR OTHER MEANS ADEQUATE TO DEMONSTRATE THE FINISHED PRODUCT FOR OWNER CONSIDERATION.
- QUALIFICATIONS AND PRIOR EXPERIENCE OF INSTALLING CONTRACTOR SHALL BE PROVIDED FOR OWNER CONSIDERATION. STAMPED ASPHALT SHALL BE COATED TO PROVIDE A DURABLE, SLIP-RESISTANT AND ATTRACTIVE FINISHED COATING.













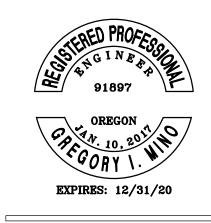
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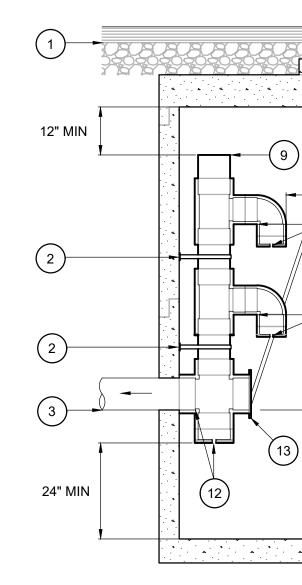
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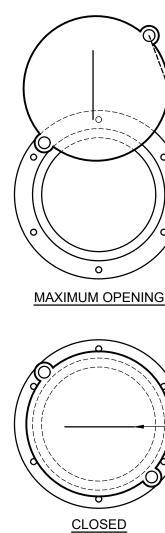
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JOB NO.







STORMTECH SC-740 CHAMBER

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

STORMTECH SC-740 CHAMBER

(not to scale) **Nominal Chamber Specifications**

Size (L x W x H) 85.4" x 51" x 30" 2,170 mm x 1,295 mm x 762 mm

Chamber Storage 45.9 ft³ (1.30 m³)

Min. Installed Storage* 74.9 ft³ (2.12 m³) Weight

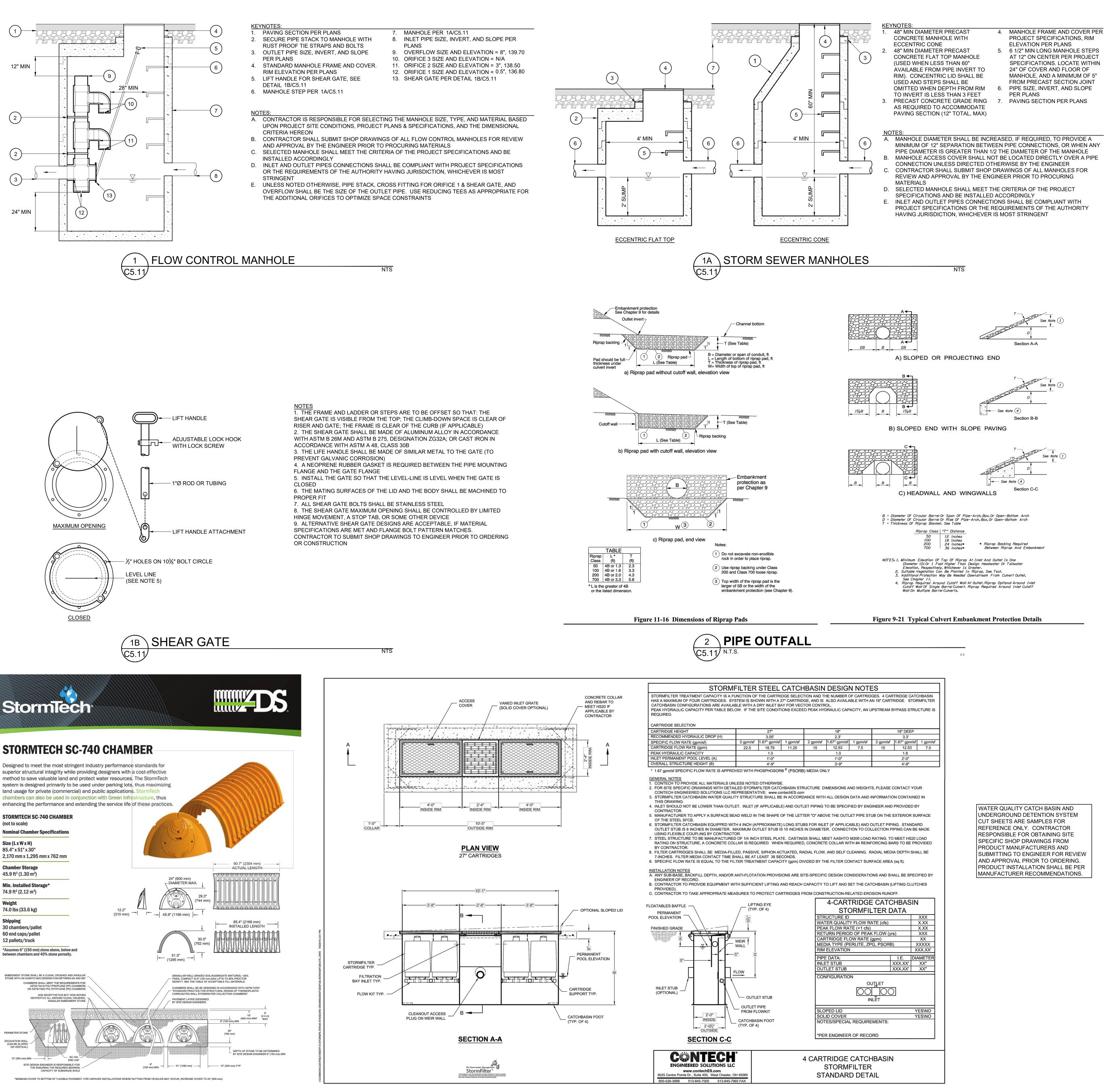
74.0 lbs (33.6 kg)

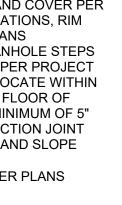
Shipping 30 chambers/pallet 60 end caps/pallet 12 pallets/truck

*Assumes 6" (150 mm) stone above, below and between chambers and 40% stone porosity.

EMBEDMENT STONE SHALL BE A CLEAN, CRUSHED AND ANGULAR STONE WITH AN AASHTO M43 DESIGNATION BETWEEN #3 AND #57 CHAMBERS SHALL MEET THE REQUIREMENTS FOR ASTM F2418 POLYPROPLENE (PP) CHAMBER OR ASTM F922 POLYETHYLENE (PE) CHAMBERS ADS GEOSYTHETICS 601T NON-WOVEI GEOTEXTILE ALL AROUND CLEAN, CRUSHED ANGULAR EMBEDMENT STONI

PERIMETER STONE EXCAVATION WALL (CAN BE SLOPED OR VERTICAL) 12" (300 mm) MIN _____ SITE DESIGN ENGINEER IS RESPONSIBLE FO THE ENSURING THE REQUIRED BEARIN CAPACITY OF SUBGRADE SOIL





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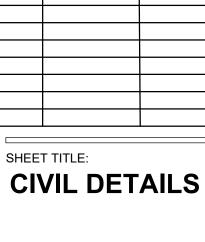
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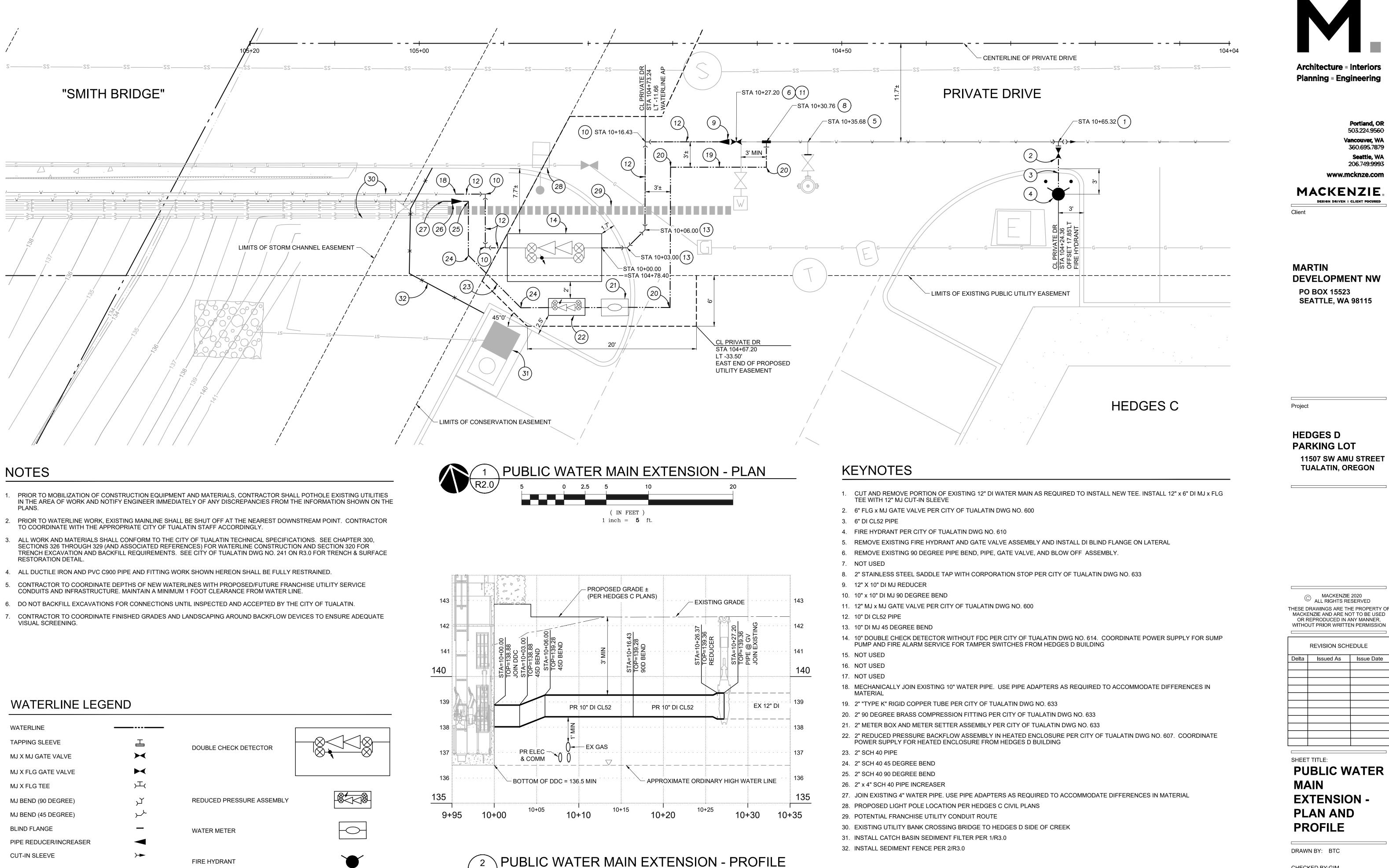
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R2.0 HORIZONTAL: 1" = 5' VERTICAL: 1" = 3'

| WATERLINE | | | |
|------------------------|-----------------------|---------------------------|--------------|
| WATERLINE | | | |
| TAPPING SLEEVE | 山 | DOUBLE CHECK DETECTOR | |
| MJ X MJ GATE VALVE | \succ | | ' ``` |
| MJ X FLG GATE VALVE | \blacktriangleright | | |
| MJ X FLG TEE | ,٣٠ | | |
| MJ BEND (90 DEGREE) | ٽر | REDUCED PRESSURE ASSEMBLY | |
| MJ BEND (45 DEGREE) | <i>ب</i> ر | | |
| BLIND FLANGE | — | WATER METER | -0- |
| PIPE REDUCER/INCREASER | | | |
| CUT-IN SLEEVE |)->- | FIRE HYDRANT | Ť |

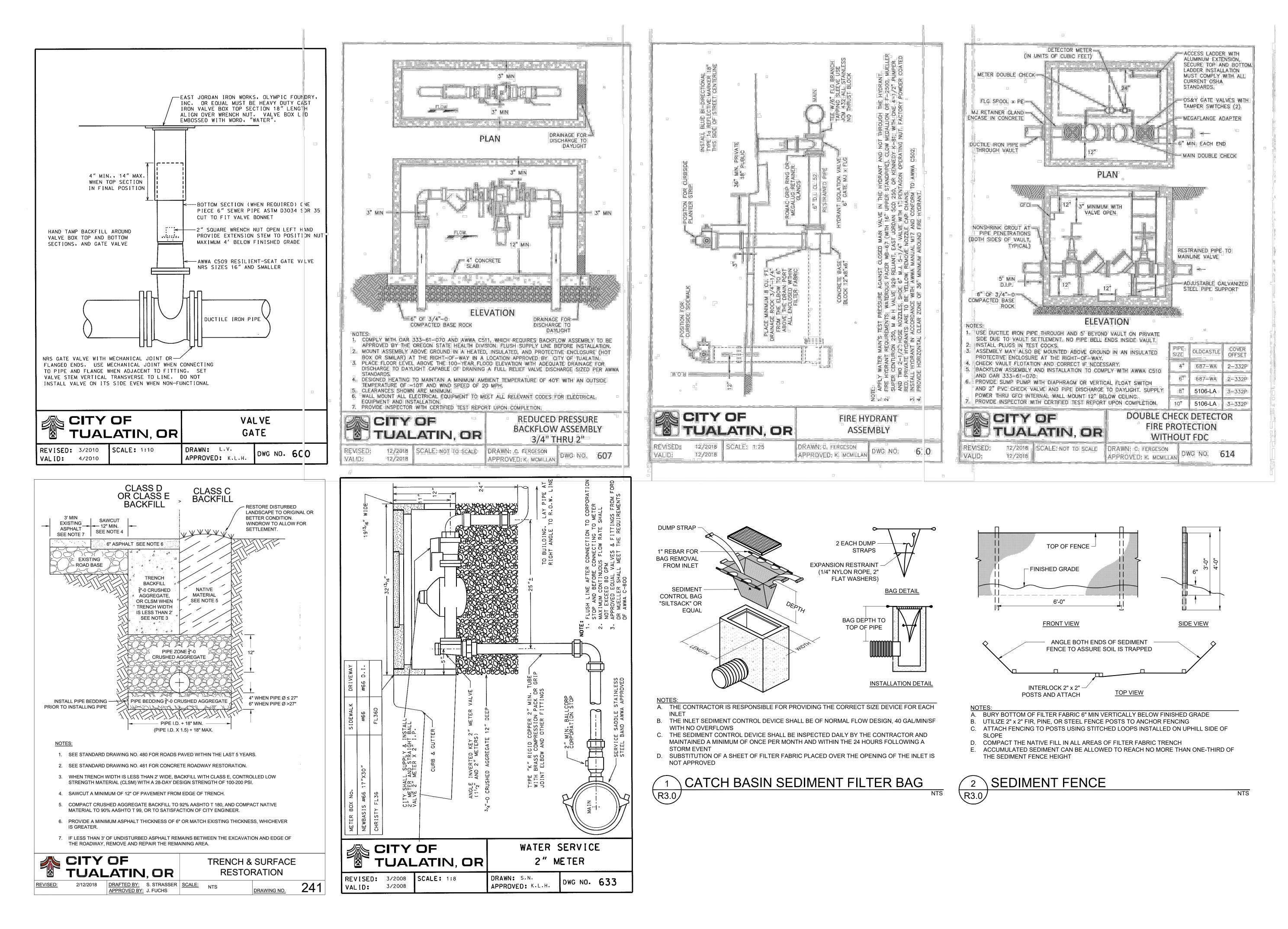
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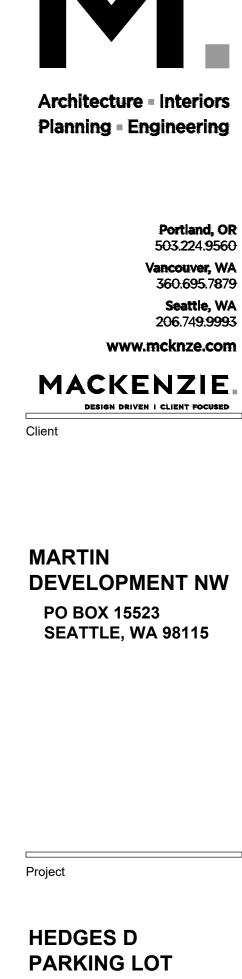
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11507 SW AMU STREET

TUALATIN, OREGON

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PUBLIC WATER MAIN EXTENSION -DETAILS

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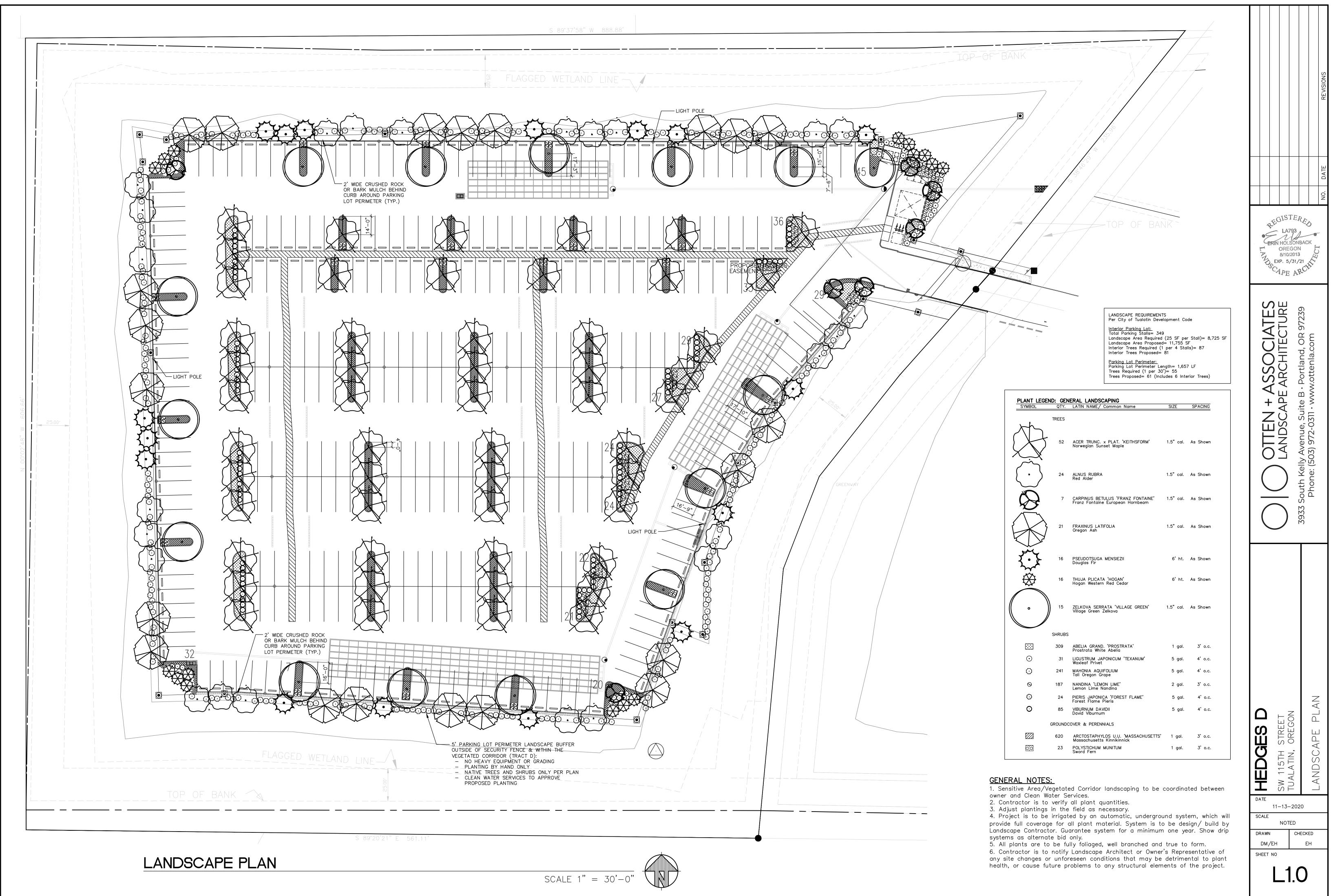
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OUTLINE SPECIFICATIONS PLANTING AND SEEDING:

GENERAL: All plants shall conform to all applicable standards of the latest edition of the "American Association of Nurserymen Standards", A.N.S.I. Z60.1 - 1973. Meet or exceed the regulations and laws of Federal, State, and County regulations, regarding the inspection of plant materials, certified as free from hazardous insects, disease, and noxious weeds, and certified fit for sale in Oregon.

The apparent silence of the Specifications and Plans as to any detail, or the apparent omission from them of a detailed description concerning any point, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of first quality are to be used. All interpretations of these Specifications shall be made upon the basis above stated.

Landscape contractor shall perform a site visit prior to bidding to view existing conditions.

PERFORMANCE QUALITY ASSURANCE: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary horticultural practices and who are completely familiar with the specified requirements and methods needed for the proper performance of the work of this section.

NOTIFICATION: Give Landscape Architect minimum of 2 days advance notice of times for inspections. Inspections at growing site does not preclude Landscape Architect's right of rejection of deficient materials at project site. Each plant failing to meet the above mentioned "Standards" or otherwise failing to meet the specified requirements as set forth shall be rejected and removed immediately from the premises by the Contractor and at his expense, and replaced with satisfactory plants or trees conforming to the specified requirements.

SUBSTITUTIONS: Only as approved by the Landscape Architect or the Owner's Representative.

GUARANTEE AND REPLACEMENT: All plant material shall be guaranteed from final acceptance for one full growing season or one year, whichever is longer. During this period the Contractor shall replace any plant material that is not in good condition and producing new growth (except that material damaged by severe weather conditions, due to Owner's negligence, normally unforeseen peculiarities of the planting site, or lost due to vandalism). Guarantee to replace, at no cost to Owner, unacceptable plant materials with plants of same variety, age, size and quality as plant originally specified. Conditions of guarantee on replacement plant shall be same as for original plant.

Landscape Contractor shall keep on site for Owner's Representative's inspection, all receipts for soil amendment and topsoil deliveries.

PROTECTION: Protect existing roads, sidewalks, and curbs, landscaping, and other features remaining as final work. Verify location of underground utilities prior to doing work. Repair and make good any damage to service lines, existing features, etc. caused by landscaping installation.

PLANT QUALITY ASSURANCE: Deliver direct from nursery. Maintain and protect roots of plant material from drying or other possible injury. Store plants in shade and protect them from weather immediately upon delivery, if not to be planted within four hours.

Nursery stock shall be healthy, well branched and rooted, formed true to variety and species, full foliaged, free of disease, injury, defects, insects, weeds, and weed roots. Trees shall have straight trunks, symmetrical tips, and have an intact single leader. Any trees with double leaders will be rejected upon inspection. All Plants: True to name, with one of each bundle or lot tagged with the common and botanical name and size of the plants in accordance with standards of practice of the American Association of Nurserymen, and shall conform to the <u>Standardized Plant Names</u>, 1942 Edition.

Container grown stock: Small container-grown plants, furnished in removable containers, shall be well rooted to ensure healthy growth. Grow container plants in containers a minimum of one year prior to delivery, with roots filling container but not root bound. Bare root stock: Roots well-branched and fibrous. Balled and burlapped (B&B): Ball shall be of natural size to ensure healthy growth. Ball shall be firm and the burlap sound. No loose or made ball will be acceptable.

TOPSOIL AND FINAL GRADES: Landscape Contractor is to supply and place 12" of topsoil in planting beds and 6" in groundcover areas. Landscape Contractor is to verify with the General Contractor if the on-site topsoil is or is not conducive to proper plant growth. The topsoil shall be a sandy loam, free of all weeds and debris inimical to lawn or plant growth. Furnish soil analysis by a qualified soil testing laboratory stating percentages of organic matter; gradation of sand, silt and clay content; cation exchange capacity; deleterious material; pH; and plant nutrient content of the topsoil. Report suitablility of topsoil for plant growth and recommended quantities of nitrogen, phosphorus and potash nutrients and soil amendments (including compost) to be added to produce satisfactory topsoil. If stockpiled topsoil on site is not conducive to proper plant growth, the Landscape Contractor shall import the required amount.

Landscaping shall include finished grades and even distribution of topsoil to meet planting requirements. Grades and slopes shall be as indicated. Planting bed grades shall be approximately 3" below adjacent walks, paving, finished grade lines, etc., to allow for bark application. Finish grading shall remove all depressions or low areas to provide positive drainage throughout the area.

PLANTING SPECIFICATIONS:

HERBICIDES: Prior to soil preparation, all areas showing any undesirable weed or grass growth shall be treated with Round-up in strict accordance with the manufacturer's instructions.

SOIL PREPARATION: Work all areas by rototilling to a minimum depth of 8". Remove all stones (over 1½" size), sticks, mortar, large clumps of vegetation, roots, debris, or extraneous matter turned up in working. Soil shall be of a homogeneous fine texture. Level, smooth and lightly compact area to plus or minus .10 of required grades.

In groundcover areas add 2" of compost (or as approved) and till in to the top 6" of soil.

PLANTING HOLE: Lay out all plant locations and excavate all soils from planting holes to 2 1/2 times the root ball or root system width. Loosen soil inside bottom of plant hole. Dispose of any "subsoil" or debris from excavation. Check drainage of planting hole with water, and adjust any area showing drainage problems.

SOIL MIX: Prepare soil mix in each planting hole by mixing: 2 part native topsoil (no subsoil)

1 part compost (as approved)

Thoroughly mix in planting hole and add fertilizers at the following rates: Small shrubs - 1/8 lb./ plant

Shrubs - 1/3 to 1/2 lb./ plant

Trees - 1/3 to 1 lb./ plant

FERTILIZER: For trees and shrubs use Commercial Fertilizer "A" Inorganic (5-4-3) with micro-nutrients and 50% slow releasing nitrogen. DO NOT apply fertilizer to Vegetated Corridor.

PLANTING TREES AND SHRUBS: Plant upright and face to give best appearance or relationship to adjacent plants and structures. Place 6" minimum, lightly compacted layer of prepared planting soil under root system. Loosen and remove twine binding and burlap from top 1/2 of root balls. Cut off cleanly all broken or frayed roots, and spread roots out. Stagger Plants in rows. Backfill planting hole with soil mix while working each layer to eliminate voids.

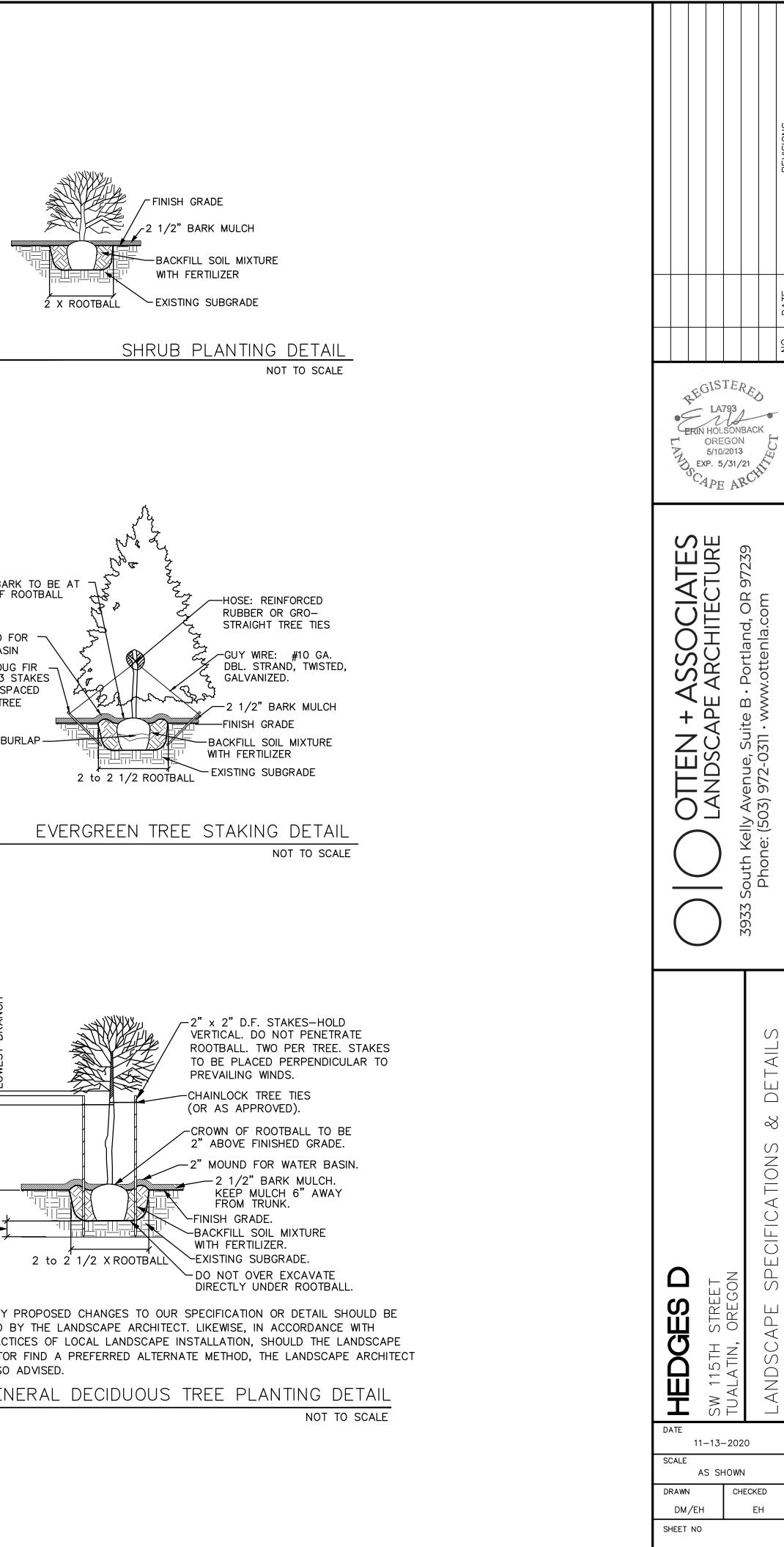
When approximately 2/3 full, water thoroughly, then allow water to soak away. Place remaining backfill and dish surface around plant to hold water. Final grade should keep root ball slightly above surrounding grade, not to exceed 1". Water again until no more water is absorbed. Initial watering by irrigation system is not allowed.

STAKING OF TREES: Stake or guy all trees. Stakes shall be 2" X 2" (nom.) quality tree stakes with point. They shall be of Douglas Fir, clear and sturdy. Stake to be minimum 2/3 the height of the tree, not to exceed 8'-0". Drive stake firmly 1'-6" below the planting hole. Tree ties for deciduous trees shall be "Chainlock" (or better). For Evergreen trees use "Gro-Strait" Tree Ties (or a reinforced rubber hose and guy wires) with guy wires of a minimum 2 strand twisted 12 ga. wire. Staking and guying shall be loose enough to allow movement of tree while holding tree upright.

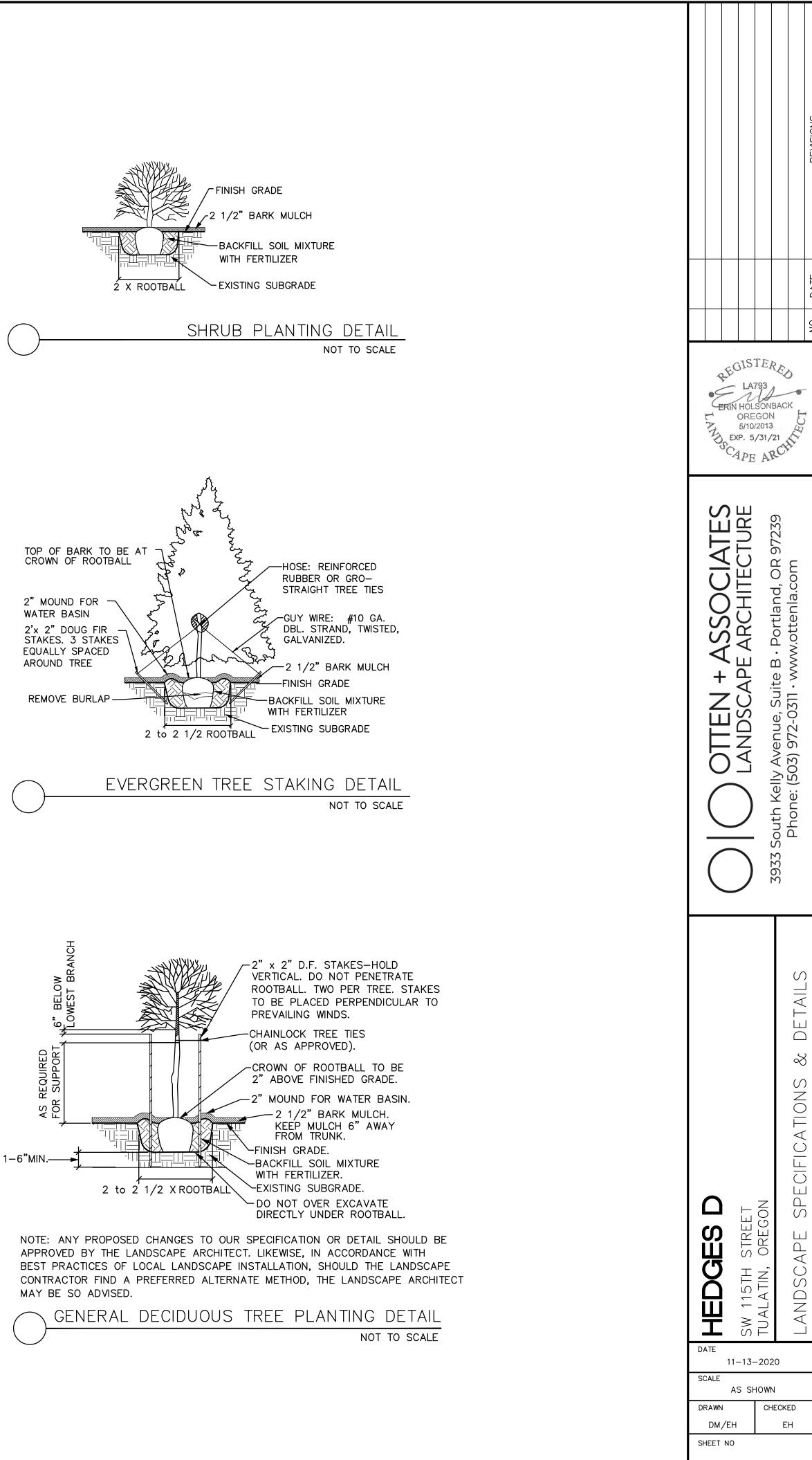
MULCHING OF PLANTINGS: Mulch planting areas with dark, aged, medium grind fir or hemlock bark (aged at least 6 months) to a depth of 2" in ground cover areas and 2½" in shrub beds. Apply evenly, not higher than grade of plant as it came from the nursery, and rake to a smooth finish. Water thoroughly, then hose down planting area with fine spray to wash leaves of plants.

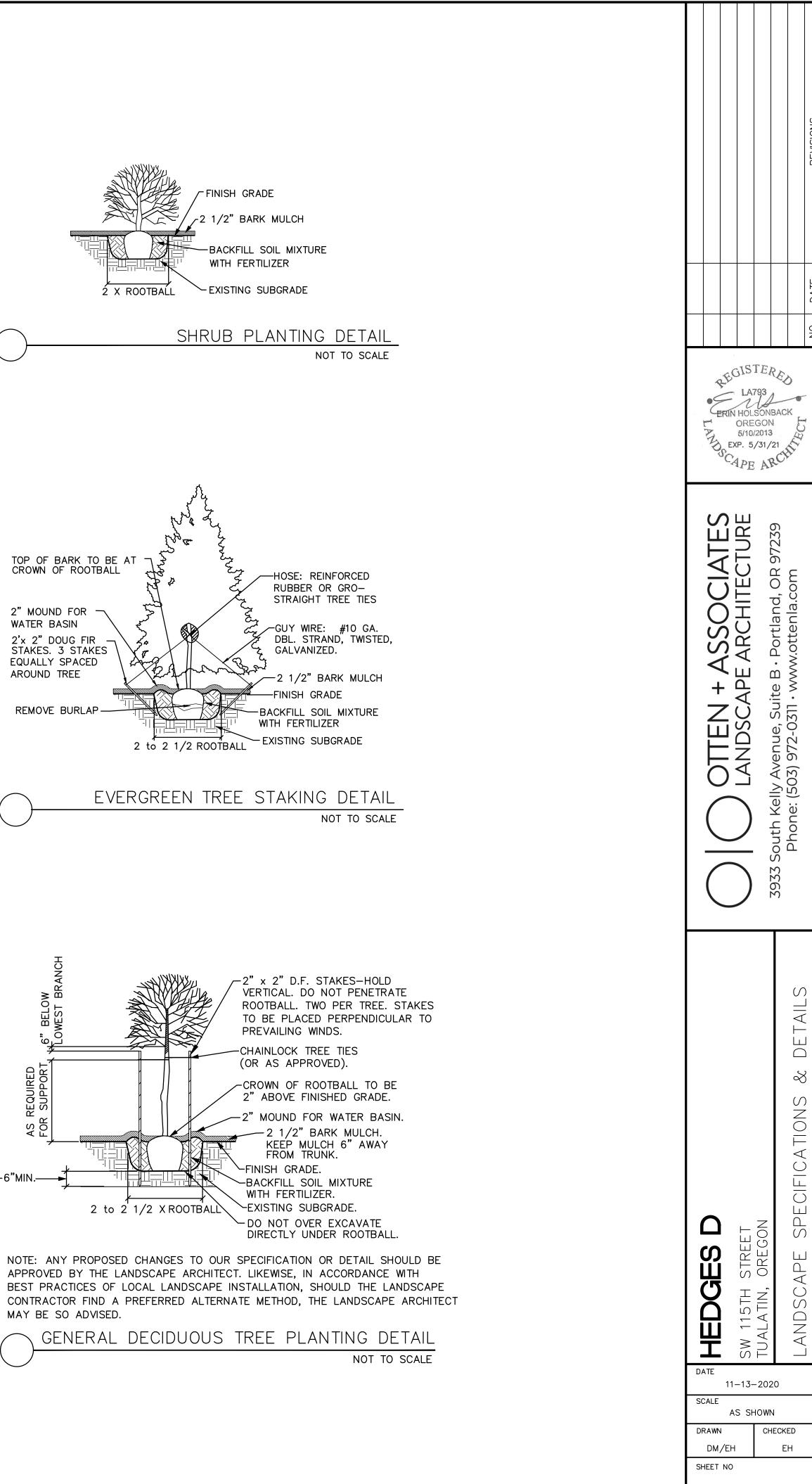
GENERAL MAINTENANCE: Protect and maintain work described in these specifications against all defects of materials and workmanship, through final acceptance. Replace plants not in normal healthy condition at the end of this period. Water, weed, cultivate, mulch, reset plants to proper grade or upright position, remove dead wood and do necessary standard maintenance operations. Irrigate when necessary to avoid drying out of plant materials, and to promote healthy growth.

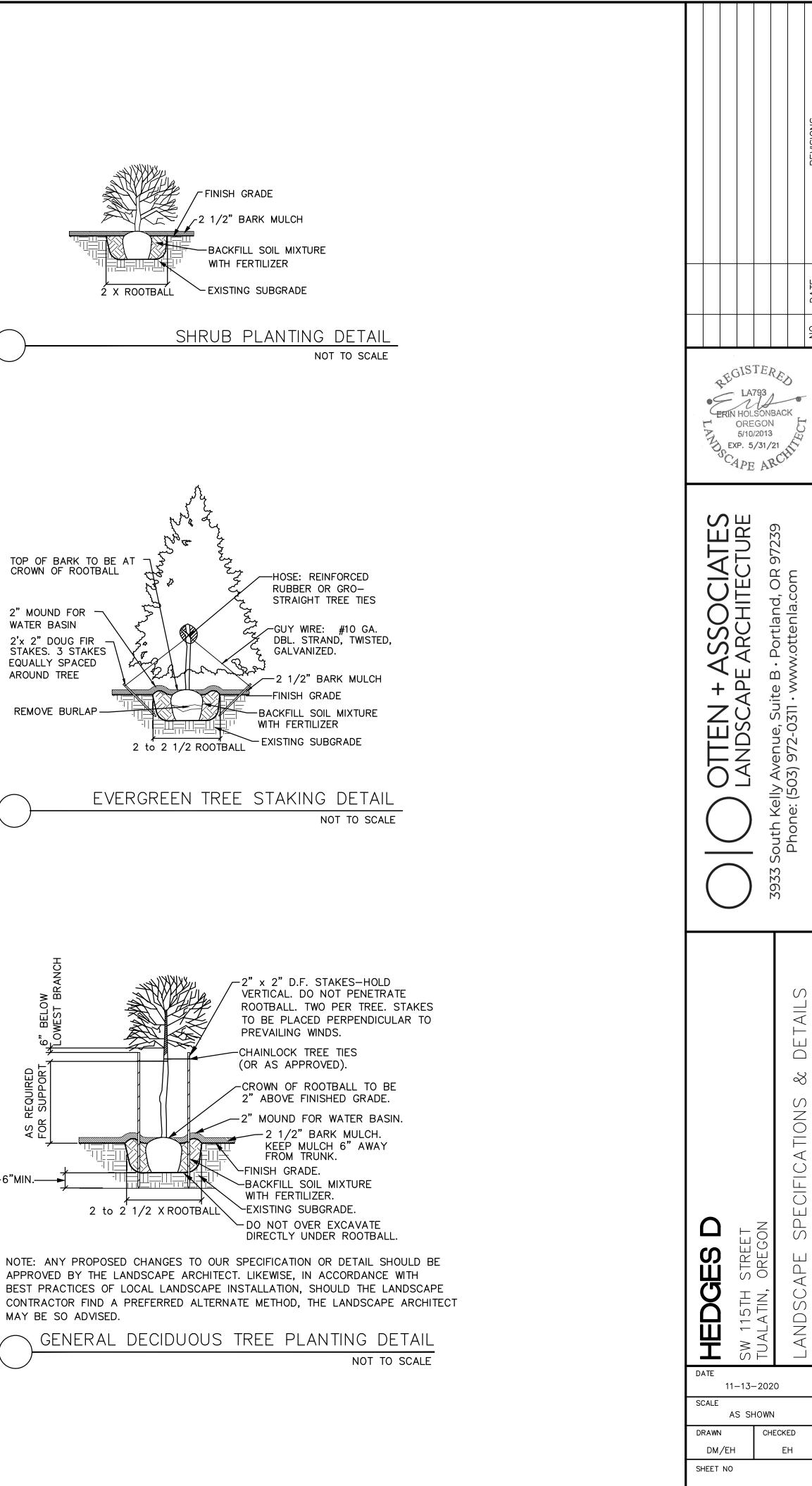
CLEAN-UP: At completion of each division of work all extra material, supplies, equipment, etc., shall be removed from the site. All walks, paving, or other surfaces shall be swept clean, mulch areas shall have debris removed and any soil cleared from surface. All areas of the project shall be kept clean, orderly and complete.



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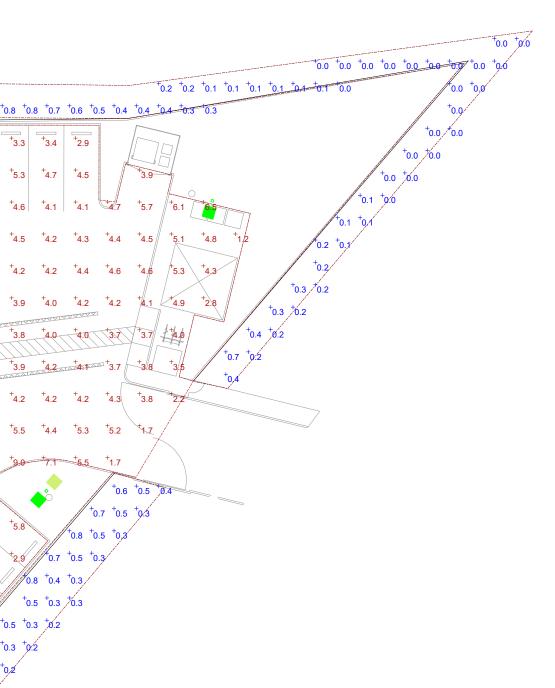






| Schedule | to.1 to.1 to.2 to.2 to.2 to.2 to.2 to.1 to.1 to.1 to.1 to.2 to.2 to.2 to.2 to.2 to.1 to.1 <t< th=""><th>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</th><th>0.5 $+0.5$ $+0.6$ $+0.7$ $+0.6$ $+0.6$ $+0.6$ $+0.7$ $+0.6$ $+0.6$ $+0.6$ $+0.6$ $+0.7$ $+0.6$ $+0.6$ $+0.6$ $+0.7$ $+0.6$ $+0.6$ $+0.6$ $+0.6$ $+0.7$ $+0.6$ 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+2.8 +2.4 +3.1 +2.6 +2.3 +3.1 +2.6 +2.3 +3.1 +2.5 +2.1 +4.2 +3.0 +2.8 +4.2 +3.0 +2.8 +4.8 +3.9 +3.9 +4.2 +3.0 +2.8 +2.9 +2.5 +2.1 +2.3 +2.6 +2.1 +2.3 +2.6 +2.1 +2.3 +2.6 +2.1 +2.3 +0.5 <td< th=""><th>$\begin{array}{c ccccccccccccccccccccccccccccccccccc$</th><th>$\begin{array}{c} & \begin{array}{c} & \begin{array}{c} +0.7 & +0.4 & +0.2 \\ \end{array} \\ & \begin{array}{c} +1.3 & +1.0 & +0.7 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} +0.7 & +0.5 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} +0.7 & +0.5 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.8 & +0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.8 & +0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.6 & +0.5 & +0.4 \end{array} \end{array}$</th></td<></th></t<></th></td<></th></t<></th> | 6.2 $+5.2$ $+4.2$ $+3.2$ 4.6 $+4.6$ $+3.9$ $+3.4$ 4.1 $+4.0$ $+3.7$ $+3.3$ 4.1 $+4.0$ $+3.7$ $+3.3$ 3.5 $+3.4$ $+3.2$ $+3.3$ 4.3 $+4.6$ $+4.1$ $+2.7$ 4.3 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$+2.8$ $+3.1$ $+3.6$</th><th>+2.6 +2.0 +1.5 +3.1 +2.5 +2.1 +3.0 +2.7 +2.5 +3.3 +3.0 +2.9 +3.2 +3.2 +3.3 +2.9 +3.5 +4.5 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +2.9 +3.5 +4.5 +2.5 +2.9 +3.6 +2.5 +2.9 +3.6 +2.7 +2.9 +3.2 +2.6 +2.9 +3.2 +2.6 +2.8 +3.0 +2.2 +2.3 +2.4 +2.7 +2.7 +2.8 +2.9 +2.9 +3.0 +2.2 +2.3 +2.4 +2.7 +2.8 +2.9 +3.2 +3.8 +3.9 +3.7 +3.8</th><th>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</th><th>+1.5 +1.7 +2.1 +1.9 +2.0 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.3 +2.2 +2.2 +2.3 +2.5 +2.6 +2.5 +3.6 +4.0 +3.5 +2.8 +2.2 +2.1 +2.3 +2.2 +2.1 +2.4 +2.2 +2.1 +2.4 +2.2 +2.1 +2.8 +2.7 +2.4 +3.0 +2.8 +2.4 +3.1 +2.6 +2.3 +3.1 +2.6 +2.3 +3.1 +2.5 +2.1 +4.2 +3.0 +2.8 +4.2 +3.0 +2.8 +4.8 +3.9 +3.9 +4.2 +3.0 +2.8 +2.9 +2.5 +2.1 +2.3 +2.6 +2.1 +2.3 +2.6 +2.1 +2.3 +2.6 +2.1 +2.3 +0.5 <td< th=""><th>$\begin{array}{c ccccccccccccccccccccccccccccccccccc$</th><th>$\begin{array}{c} & \begin{array}{c} & \begin{array}{c} +0.7 & +0.4 & +0.2 \\ \end{array} \\ & \begin{array}{c} +1.3 & +1.0 & +0.7 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} +0.7 & +0.5 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} +0.7 & +0.5 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.8 & +0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.8 & +0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.6 & +0.5 & +0.4 \end{array} \end{array}$</th></td<></th></t<></th></td<></th></t<> | 2 $+1.1$ $+1.0$ $+1.1$ 3 $+1.5$ $+1.4$ $+1.4$ 2 $+2.0$ $+1.8$ $+1.8$ 7 $+2.4$ $+2.1$ $+1.9$ 3 $+2.5$ $+2.1$ $+1.9$ 3 $+2.5$ $+2.1$ $+1.9$ 3 $+2.5$ $+2.1$ $+2.0$ 2 $+3.1$ $+2.4$ $+2.4$ 4 $+2.6$ $+2.4$ $+2.2$ 5 $+2.9$ $+2.5$ $+2.2$ 6 $+2.9$ $+2.5$ $+2.2$ 7 $+2.9$ $+2.6$ $+2.8$ 7 $+2.9$ $+2.6$ $+2.8$ 7 $+3.0$ $+2.9$ $+3.0$ 7 $+2.9$ $+2.9$ $+3.0$ 7 $+2.9$ $+2.9$ $+3.0$ 7 $+2.9$ $+2.9$ $+3.0$ 7 $+2.8$ $+2.9$ $+3.0$ 7 $+3.1$ $+2.8$ $+2.7$ 8 $+2.8$ $+2.9$ $+3.0$ | +1.6 +1.9 +2.2 +1.8 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* *1.8 *1.8 *1.8 * *1.8 *1.8 * * *1.8 *1.8 * * *1.8 * * * *1.9 * * * *1.8 * * * *1.8 * * * *2.0 * * * * *2.1 * * * * *2.2 * * * * *1.8 * * * * *2.2 * * * <t< th=""><th>+3.8 $+3.7$ $+3.1$ $+3.6$ $+4.8$ $+3.8$ $+4.2$ $+4.3$ $+3.6$ $+4.0$ $+4.1$ $+3.7$ $+3.5$ $+3.5$ $+3.3$ $+4.0$ $+4.1$ $+3.7$ $+3.5$ $+3.5$ $+3.3$ $+3.0$ $+3.1$ $+3.0$ $+3.0$ $+3.1$ $+3.1$ $+3.0$ $+3.1$ $+3.1$ $+3.0$ $+3.1$ $+3.1$ $+3.0$ $+3.2$ $+2.4$ $+2.0$ $+2.2$ $+2.4$ $+1.9$ $+2.0$ $+2.2$ $+1.9$ $+2.0$ $+2.2$ $+1.9$ $+2.0$ $+2.2$ $+1.8$ $+1.9$ $+2.0$ $+1.7$ $+1.8$ $+2.0$ $+2.2$ $+2.4$ $+2.6$ $+3.2$ $+2.4$ $+2.6$ $+3.2$ $+2.2$ $+2.4$ $+2.6$ $+3.2$ $+2.2$ $+2.4$ $+2.6$ $+3.2$ $+2.5$ $+2.8$ $+3.1$ $+3.6$</th><th>+2.6 +2.0 +1.5 +3.1 +2.5 +2.1 +3.0 +2.7 +2.5 +3.3 +3.0 +2.9 +3.2 +3.2 +3.3 +2.9 +3.5 +4.5 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +2.9 +3.5 +4.5 +2.5 +2.9 +3.6 +2.5 +2.9 +3.6 +2.7 +2.9 +3.2 +2.6 +2.9 +3.2 +2.6 +2.8 +3.0 +2.2 +2.3 +2.4 +2.7 +2.7 +2.8 +2.9 +2.9 +3.0 +2.2 +2.3 +2.4 +2.7 +2.8 +2.9 +3.2 +3.8 +3.9 +3.7 +3.8</th><th>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</th><th>+1.5 +1.7 +2.1 +1.9 +2.0 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.3 +2.2 +2.2 +2.3 +2.5 +2.6 +2.5 +3.6 +4.0 +3.5 +2.8 +2.2 +2.1 +2.3 +2.2 +2.1 +2.4 +2.2 +2.1 +2.4 +2.2 +2.1 +2.8 +2.7 +2.4 +3.0 +2.8 +2.4 +3.1 +2.6 +2.3 +3.1 +2.6 +2.3 +3.1 +2.5 +2.1 +4.2 +3.0 +2.8 +4.2 +3.0 +2.8 +4.8 +3.9 +3.9 +4.2 +3.0 +2.8 +2.9 +2.5 +2.1 +2.3 +2.6 +2.1 +2.3 +2.6 +2.1 +2.3 +2.6 +2.1 +2.3 +0.5 <td< th=""><th>$\begin{array}{c ccccccccccccccccccccccccccccccccccc$</th><th>$\begin{array}{c} & \begin{array}{c} & \begin{array}{c} +0.7 & +0.4 & +0.2 \\ \end{array} \\ & \begin{array}{c} +1.3 & +1.0 & +0.7 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} +0.7 & +0.5 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} +0.7 & +0.5 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.8 & +0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.8 & +0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.6 & +0.5 & +0.4 \end{array} \end{array}$</th></td<></th></t<></th></td<> | 2.8 $+3.5$ $+4.0$ 2.8 $+3.5$ $+4.0$ 2.7 $+3.7$ $+4.8$ 2.6 $+3.2$ $+3.6$ 2.3 $+2.7$ $+2.9$ 1.9 $+2.2$ $+2.2$ 1.7 $+1.8$ $+1.9$ 1.6 $+1.6$ $+1.7$ 1.5 $+1.4$ $+1.4$ 1.8 $+1.7$ $+1.7$ 2.2 $+2.0$ $+1.9$ 2.6 $+2.3$ $+2.0$ 2.9 $+2.4$ $+2.1$ 3.0 $+2.4$ $+2.1$ 3.0 $+2.4$ $+2.3$ 4.7 $+3.8$ $+4.0$ 3.9 $+2.9$ $+2.7$ 3.1 $+2.5$ $+2.4$ 2.9 $+2.5$ $+2.3$ 4.7 $+3.8$ $+4.0$ 3.9 $+2.9$ $+2.7$ 3.1 $+2.5$ $+2.4$ 2.9 $+2.5$ $+2.4$ 3.0 $+2.9$ $+2.7$ 3.7 $+3.4$ $+2.9$ | *3.3 *5.8 *3.8 *3.8 *5.4 *8.0 *7.1 *3.8 *4.1 *8.4 *5.4 *3.7 *3.2 *6.4 *4.5 *3.9 *2.8 *5.0 *3.9 * *2.6 *3.7 *3.4 * *2.2 *2.8 *3.1 * *1.8 *1.8 *1.9 * *1.8 *1.8 *1.8 * *1.8 *1.8 *1.8 * *1.8 *1.8 * * *1.8 *1.8 * * *1.8 * * * *1.9 * * * *1.8 * * * *1.8 * * * *2.0 * * * * *2.1 * * * * *2.2 * * * * *1.8 * * * * *2.2 * * * <t< th=""><th>+3.8 $+3.7$ $+3.1$ $+3.6$ $+4.8$ $+3.8$ $+4.2$ $+4.3$ $+3.6$ $+4.0$ $+4.1$ $+3.7$ $+3.5$ $+3.5$ $+3.3$ $+4.0$ $+4.1$ $+3.7$ $+3.5$ $+3.5$ $+3.3$ $+3.0$ $+3.1$ $+3.0$ $+3.0$ $+3.1$ $+3.1$ $+3.0$ $+3.1$ $+3.1$ $+3.0$ $+3.1$ $+3.1$ $+3.0$ $+3.2$ $+2.4$ $+2.0$ $+2.2$ $+2.4$ $+1.9$ $+2.0$ $+2.2$ $+1.9$ $+2.0$ $+2.2$ $+1.9$ $+2.0$ $+2.2$ $+1.8$ $+1.9$ $+2.0$ $+1.7$ $+1.8$ $+2.0$ $+2.2$ $+2.4$ $+2.6$ $+3.2$ $+2.4$ $+2.6$ $+3.2$ $+2.2$ $+2.4$ $+2.6$ $+3.2$ $+2.2$ $+2.4$ $+2.6$ $+3.2$ $+2.5$ $+2.8$ $+3.1$ $+3.6$</th><th>+2.6 +2.0 +1.5 +3.1 +2.5 +2.1 +3.0 +2.7 +2.5 +3.3 +3.0 +2.9 +3.2 +3.2 +3.3 +2.9 +3.5 +4.5 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +2.9 +3.5 +4.5 +2.5 +2.9 +3.6 +2.5 +2.9 +3.6 +2.7 +2.9 +3.2 +2.6 +2.9 +3.2 +2.6 +2.8 +3.0 +2.2 +2.3 +2.4 +2.7 +2.7 +2.8 +2.9 +2.9 +3.0 +2.2 +2.3 +2.4 +2.7 +2.8 +2.9 +3.2 +3.8 +3.9 +3.7 +3.8</th><th>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</th><th>+1.5 +1.7 +2.1 +1.9 +2.0 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.3 +2.2 +2.2 +2.3 +2.5 +2.6 +2.5 +3.6 +4.0 +3.5 +2.8 +2.2 +2.1 +2.3 +2.2 +2.1 +2.4 +2.2 +2.1 +2.4 +2.2 +2.1 +2.8 +2.7 +2.4 +3.0 +2.8 +2.4 +3.1 +2.6 +2.3 +3.1 +2.6 +2.3 +3.1 +2.5 +2.1 +4.2 +3.0 +2.8 +4.2 +3.0 +2.8 +4.8 +3.9 +3.9 +4.2 +3.0 +2.8 +2.9 +2.5 +2.1 +2.3 +2.6 +2.1 +2.3 +2.6 +2.1 +2.3 +2.6 +2.1 +2.3 +0.5 <td< th=""><th>$\begin{array}{c ccccccccccccccccccccccccccccccccccc$</th><th>$\begin{array}{c} & \begin{array}{c} & \begin{array}{c} +0.7 & +0.4 & +0.2 \\ \end{array} \\ & \begin{array}{c} +1.3 & +1.0 & +0.7 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} +0.7 & +0.5 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} +0.7 & +0.5 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.8 & +0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.8 & +0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.6 & +0.5 & +0.4 \end{array} \end{array}$</th></td<></th></t<> | +3.8 $+3.7$ $+3.1$ $+3.6$ $+4.8$ $+3.8$ $+4.2$ $+4.3$ $+3.6$ $+4.0$ $+4.1$ $+3.7$ $+3.5$ $+3.5$ $+3.3$ $+4.0$ $+4.1$ $+3.7$ $+3.5$ $+3.5$ $+3.3$ $+3.0$ $+3.1$ $+3.0$ $+3.0$ $+3.1$ $+3.1$ $+3.0$ $+3.1$ $+3.1$ $+3.0$ $+3.1$ $+3.1$ $+3.0$ $+3.2$ $+2.4$ $+2.0$ $+2.2$ $+2.4$ $+1.9$ $+2.0$ $+2.2$ $+1.9$ $+2.0$ $+2.2$ $+1.9$ $+2.0$ $+2.2$ $+1.8$ $+1.9$ $+2.0$ $+1.7$ $+1.8$ $+2.0$ $+2.2$ $+2.4$ $+2.6$ $+3.2$ $+2.4$ $+2.6$ $+3.2$ $+2.2$ $+2.4$ $+2.6$ $+3.2$ $+2.2$ $+2.4$ $+2.6$ $+3.2$ $+2.5$ $+2.8$ $+3.1$ $+3.6$ | +2.6 +2.0 +1.5 +3.1 +2.5 +2.1 +3.0 +2.7 +2.5 +3.3 +3.0 +2.9 +3.2 +3.2 +3.3 +2.9 +3.5 +4.5 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +3.8 +4.4 +5.1 +2.9 +3.5 +4.5 +2.5 +2.9 +3.6 +2.5 +2.9 +3.6 +2.7 +2.9 +3.2 +2.6 +2.9 +3.2 +2.6 +2.8 +3.0 +2.2 +2.3 +2.4 +2.7 +2.7 +2.8 +2.9 +2.9 +3.0 +2.2 +2.3 +2.4 +2.7 +2.8 +2.9 +3.2 +3.8 +3.9 +3.7 +3.8 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | +1.5 +1.7 +2.1 +1.9 +2.0 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.2 +2.3 +2.2 +2.2 +2.3 +2.5 +2.6 +2.5 +3.6 +4.0 +3.5 +2.8 +2.2 +2.1 +2.3 +2.2 +2.1 +2.4 +2.2 +2.1 +2.4 +2.2 +2.1 +2.8 +2.7 +2.4 +3.0 +2.8 +2.4 +3.1 +2.6 +2.3 +3.1 +2.6 +2.3 +3.1 +2.5 +2.1 +4.2 +3.0 +2.8 +4.2 +3.0 +2.8 +4.8 +3.9 +3.9 +4.2 +3.0 +2.8 +2.9 +2.5 +2.1 +2.3 +2.6 +2.1 +2.3 +2.6 +2.1 +2.3 +2.6 +2.1 +2.3 +0.5 <td< th=""><th>$\begin{array}{c ccccccccccccccccccccccccccccccccccc$</th><th>$\begin{array}{c} & \begin{array}{c} & \begin{array}{c} +0.7 & +0.4 & +0.2 \\ \end{array} \\ & \begin{array}{c} +1.3 & +1.0 & +0.7 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} +0.7 & +0.5 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} +0.7 & +0.5 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.8 & +0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.8 & +0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.6 & +0.5 & +0.4 \end{array} \end{array}$</th></td<> | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | $\begin{array}{c} & \begin{array}{c} & \begin{array}{c} +0.7 & +0.4 & +0.2 \\ \end{array} \\ & \begin{array}{c} +1.3 & +1.0 & +0.7 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} +0.7 & +0.5 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} +0.7 & +0.5 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.8 & +0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.8 & +0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.6 & +0.4 & +0.3 \\ \end{array} \\ & \begin{array}{c} 0.6 & +0.5 & +0.4 \end{array} \end{array}$ |
|--|--|---|--|--|--|---|--|---|---|---|--|--|--|---|--|---|---|
| Schedule Symbol Q ⁻¹ | | -740-U-T4W GALLEO LUMINA: 800mA I 16 LEDS WIDE O 4B-740-U- GALLEO LUMINA: 800mA I 16 LEDS FORWAF | N AREA AND ROADWAY IRE (4) 70 CRI, 4000K, LIGHTSQUARES WITH S EACH AND TYPE IV | Lamp 358 0.9 | Wattage Efficience 171 100% 171 100% | Y | | 1 | | 0.4 fc 0.9 fc 0. | 1in Max/Min Avg | /Min /A | | ne property | c is the area line up to | | |

| Schedule | | | | | | | | |
|----------|-----|---|-------------------------------|---|-----------------------|-----|---------|------------|
| Symbol | QTY | Manufacturer | Catalog Number | Description | Lumens per Lamp | LLF | Wattage | Efficiency |
| | 18 | COOPER LIGHTING SOLUTIONS - STREETWORKS (FORMERLY EATON) | GAN-SA4B-740-U-T4W | GALLEON AREA AND ROADWAY LUMINAIRE (4) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS | 358 | 0.9 | 171 | 100% |
| | 0 | COOPER LIGHTING SOLUTIONS - McGRAW- EDISON (FORMERLY EATON) | GLEON-SA4B-740-U- T4FT-HSS | GALLEON AREA AND ROADWAY LUMINAIRE (4) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD | 255 | 0.9 | 171 | 100% |
| | 12 | COOPER LIGHTING SOLUTIONS - McGRAW- EDISON (FORMERLY EATON) | GLEON-SA4B-740-U- SLR-HSS | GALLEON AREA AND ROADWAY LUMINAIRE (4) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD | 267 | 0.9 | 171 | 100% |
| | 11 | COOPER LIGHTING SOLUTIONS - McGRAW- EDISON (FORMERLY EATON) | GLEON-SA4B-740-U- SLL-HSS | GALLEON AREA AND ROADWAY LUMINAIRE (4) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD | 267 | 0.9 | 171 | 100% |



light calc is the area property line up to

currentelectrical construction company

> **Designer** ko **Date** 11/17/2020