Western Hills Athletic Club

4801 Rollingwood Drive
Rollingwood, Texas 78746

SUBMITTAL DATE:
OCTOBER 4, 2024

OWNER:
WESTERN HILLS ATHLETIC CLUB
4801 ROLLINGWOOD DR
ROLLINGWOOD, TEXAS 78746

CONTACT:
CATHERINE SCOTT, PRESIDENT
(512) 327-6373

CIVIL ENGINEER / AGENT:
MWM DESIGN GROUP, INC.
9001 N IH35, SUITE 102
AUSTIN, TX. 78753

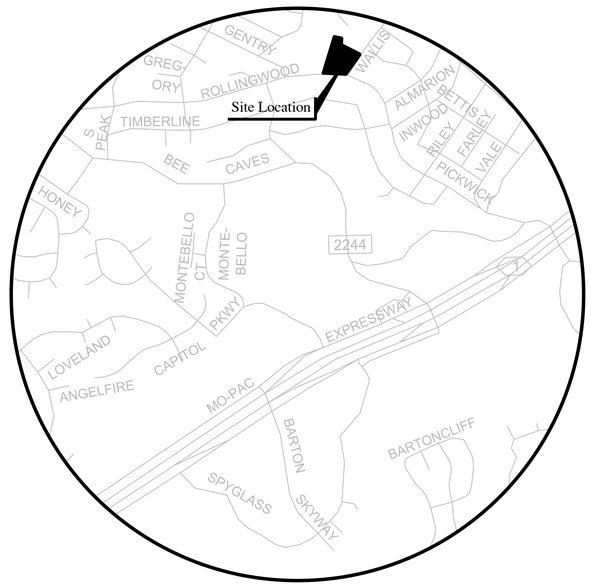
CONTACT:
TOMAS RODRIGUEZ, P.E., R.A.S.
(512) 453-0767

LANDSCAPE ARCHITECT:
MWM DESIGN GROUP, INC.
9001 N IH35, SUITE 102
AUSTIN, TX. 78753

CONTACT:
DAVID CAZARES, ASLA, LEED AP
(512) 453-0767

STRUCTURAL ENGINEER:
ENCOTECH ENGINEERING CONSULTANTS
8500 BLUFFSTONE COVE, SUITE B-103
AUSTIN, TX. 78759

CONTACT:
HAMZAH KHATAW, P.E.
(512) 338-1101



LOCATION MAP

LEGAL DESCRIPTION: LOT 1, WESTERN HILLS ATHLETIC CLUB ADDITION
ZONED: PARK ZONING DISTRICT (P)
PROPOSED IMPERVIOUS COVER: 65,591.55 SF, 46.88%
WATERSHED: LADY BIRD LAKE & EANES CREEK CLASSIFICATION: SUBURBAN

NOTES:

1. THIS SITE LIES WITHIN THE ROLLINGWOOD FULL PURPOSE JURISDICTION.
2. NO PORTION OF THIS SITE IS WITHIN THE 100 YEAR FLOODPLAIN AS PER FEMA FIRM PANEL #48453C0445K, DATED JANUARY 22, 2020.
3. NO CRITICAL ENVIRONMENTAL FEATURES ARE KNOWN TO EXIST WITHIN 150' OF THE PROJECT SITE.
4. THIS SITE IS LOCATED OVER THE EDWARD'S AQUIFER RECHARGE ZONE.
5. TREES GREATER THAN 8" IN DIAMETER ARE KNOWN TO EXIST ON THIS SITE.
6. AS PART OF THE SITE PLAN, THE STORM WATER POLLUTION PREVENTION PLAN (SWIPPP) IS REQUIRED TO BE ON SITE AT ALL TIMES.

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6	201	DEMOLITION PLAN
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25	S-101	RETAINING WALL PLAN
26	S-102	TENNIS COURT PLAN
27	S-200	TYPICAL CONCRETE DETAILS
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29	S-202	TYPICAL CONCRETE DETAILS
30	S-203	CONCRETE DETAILS

RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL, WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY CITY ENGINEERS.

SUBMITTED BY:

TOMAS RODRIGEUZ, P.E., R.A.S. DATE
MWM DESIGNGROUP
9001 N IH35, SUITE 102
AUSTIN, TX. 78753
(512)453-0767

APPROVED BY:

FOR DIRECTOR OF PLANNING AND DEVELOPMENT REVIEW DEPARTMENT DATE

SITE DEVELOPMENT PERMIT NUMBER

STATE OF TEXAS — TOMAS M. RODRIGUEZ — 119179 — LICENSED PROFESSIONAL ENGINEER
TBPE FH 1416
10/4/2024

REGISTERED LANDSCAPE ARCHITECT — DAVID J. CAZARES — 1871 — STATE OF TEXAS
04 October 2024

mwm DesignGroup
TBPELS F-1416 10065600
TBAE 1452
HUB
9001 N IH35
Suite 102
Austin, Texas 78753
p: 512.453.0767
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NO.	DATE	DESCRIPTION	BY

0 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

COVER SHEET

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

000

1 OF 30

Files: \\mwmdata\MWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\000 Cover.dwg 22x34

CONTRACTOR NOTES:

1. THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT TYPE AND LOCATION OF ALL UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES. THE CONTRACTOR SHALL A) IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR-DAMAGED UTILITIES, AND B) PAY FOR SAME AT NO EXTRA COST TO THE OWNER.

2. THE BIDDER (CONTRACTOR AFTER AWARD) SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY UNREPORTED OBSTACLES OR DISCREPANCIES THAT MAY IMPEDE OR PREVENT THE PROPER CONSTRUCTION OF THIS PROJECT.

3. WHERE REMOVAL OF BASE AND PAVEMENT IS NECESSARY FOR THIS PROJECT ALL BASE AND PAVEMENT SHALL BE REPLACED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND STANDARD SPECIFICATIONS. ALL PAVEMENT CUTS SHALL BE SAW CUT PRIOR TO PLACEMENT OF H.M.A.C. AND COORDINATED WITH CITY OF ROLLINGWOOD AND CITY INSPECTORS.

4. SLOPES OF ROADWAY CUTS AND EMBANKMENTS DAMAGED BY ANY OPERATION OF THE CONTRACTOR DURING THE EXECUTION OF THIS PROJECT SHALL BE REPAIRED AND RESTORED TO THE ORIGINAL PRE-CONSTRUCTION CONDITION IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS OF THE STANDARD SPECIFICATIONS. BACK FILL AND FILL PLACED DURING REMEDIAL GRADING SHALL BE COMPACTED TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE ORIGINAL CONDITIONS AND TO THE SATISFACTION OF THE ENGINEER AND GOVERNING AUTHORITIES.

5. BEFORE DISCONNECTING ANY WATER LINE OR GAS LINE, CONTRACTOR MUST PROVIDE FORTY-EIGHT (48) HOUR NOTICE TO THE OWNER EXCEPT IN THE CASE OF A BONA FIDE EMERGENCY.

6. CONTRACTOR SHALL COMPLY WITH CONSTRUCTION SEQUENCING WHICH IS SPECIFIED ON THIS SHEET.

7. ALL CONSTRUCTION SHALL FOLLOW THE LATEST VERSIONS OF THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, UNLESS NOTED OTHERWISE.

8. UPON REQUEST, COMPUTER AIDED DESIGN (CAD) FILES CAN BE MADE AVAILABLE TO THE CONTRACTOR FOR THE PURPOSES OF CONSTRUCTION STAKING.

9. CONTRACTOR TO PROVIDE A 24-HOUR (MINIMUM) NOTICE TO ENGINEER PRIOR TO ALL UTILITY INSTALLATION TO ALLOW FOR VISUAL OBSERVATION OF TRENCH EXCAVATION, BEDDING, PIPE MATERIAL, AND BACKFILL.

PAVEMENT:

1. CONCRETE PAVEMENT SHALL BE FURNISHED AND INSTALLED IN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS STANDARD SPECIFICATIONS.

2. CONTRACTOR SHALL PROVIDE A 24-HOUR (MINIMUM) NOTICE TO ENGINEER PRIOR TO ALL CONCRETE POURS TO ALLOW FOR VISUAL OBSERVATION OF FORMWORK AND REBAR PLACEMENT.

EXCAVATION AND BACKFILL:

1. ALL EXCAVATION FOR THIS PROJECT SHALL BE UNCLASSIFIED.

2. CONTRACTOR/REPAIR CREW MUST NOTIFY INSPECTOR AT LEAST TWENTY FOUR (24) HOURS PRIOR TO BEGINNING PERMANENT BACK FILL OPERATIONS.

3. BACKFILL DENSITY SHALL BE AS SPECIFIED IN STANDARD SPECIFICATIONS. TEST METHODS SHALL BE AS SPECIFIED IN THE STANDARD SPECIFICATIONS UNLESS INDICATED OTHERWISE IN WRITING BY THE ENGINEER.

4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS.

HANDICAP ACCESSBILITY:

1. ACCESSIBLE ROUTES MUST HAVE A RUNNING-SLOPE NO GREATER THAN 5% UNLESS DESIGNED AS A RAMP.

2. ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 2%.

3. THE MAXIMUM RUNNING SLOPE OF A RAMP IN NEW CONSTRUCTION IS 8.33%.

4. TAS AND ADA CRITERIA SHALL GOVERN.

SAFETY:

1. CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A SAFE, NEAT AND WORKMANLIKE MANNER AT ALL TIMES. JOB SITE SAFETY SHALL NOT BE COMPROMISED. ANY UNATTRACTIVE NUISANCE SHALL BE REMOVED OR CAMOUFLAGED BY CONTRACTOR WHEN DIRECTED BY THE OWNER OR ENGINEER.

2. ALL HOLES, TRENCHES, AND OTHER HAZARDOUS AREAS SHALL BE ADEQUATELY PROTECTED BY BARRICADES, FENCING, LIGHTS, AND/OR OTHER PROTECTIVE DEVICES AT ALL TIMES.

3. REMOVAL OF EXCAVATED MATERIALS AND DAILY CLEANUP OPERATIONS SHALL BE PERFORMED TO THE SPECIFICATIONS AND TO THE SATISFACTION OF THE OWNER AND ENGINEER.

4. CONTRACTOR SHALL MAINTAIN A SUPERINTENDENT UPON THE PROJECT AT ALL TIMES WORK IS IN PROGRESS.

TRAFFIC CONTROL NOTES:

1. THE CONTRACTOR SHALL MAINTAIN CLEAR PASSAGE FOR LOCAL TRAFFIC AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

2. ALL TRAFFIC CONTROL DEVICES, SIGNS, BARRICADES, WARNING SIGNS, AND FLAG MEN OPERATIONS SHALL BE PLACED, CONSTRUCTED, EXECUTED AND MAINTAINED IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).

3. WHERE PORTABLE SIGNS REQUIRE THE USE OF WEIGHTS, SANDBAGS SHALL BE USED. THE USE OF SOLID OBJECTS SUCH AS CONCRETE, ROCKS, IRON, ETC. SHALL NOT BE PERMITTED.

4. INSTALLATION OF CONSTRUCTION BARRICADING AND SIGNING SHALL BE COORDINATED THROUGH THE CITY OF ROLLINGWOOD RIGHT OF WAY MANAGEMENT AT (512) 974-1150 (OR APPLICABLE REGULATORY ENTITY).

5. ALL TRAFFIC CONTROL SIGNS SHALL REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLANS. IF SIGNS REQUIRE RELOCATION, CONTRACTOR SHALL CONTACT THE APPLICABLE REGULATORY ENTITY.

6. CONTRACTOR MUST RESTORE ALL PAVEMENT MARKINGS DISTURBED DURING CONSTRUCTION. CONTRACTOR SHALL OBSERVE ALL APPLICABLE MATERIALS, SPECIFICATIONS, AND INSTALLATION REQUIREMENTS INCLUDING SPECIAL ATTENTION TO MAINTAINING PROPER DIMENSIONS AND ALIGNMENT.

TRENCH SAFETY:

1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED.

2. IN ACCORDANCE WITH THE U.S. OSHA REGULATIONS, WHEN EMPLOYEES ARE REQUIRED TO BE IN TRENCHES 4 FOOT DEEP OR MORE, ADEQUATE MEANS OF EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.

ORDINANCE REQUIREMENTS

1. ALL IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE RELEASED SITE PLAN. ANY ADDITIONAL IMPROVEMENTS WILL REQUIRE A SITE PLAN AMENDMENT AND APPROVAL FROM THE DEVELOPMENT SERVICES DEPARTMENT.
2. APPROVAL OF THIS SITE PLAN DOES NOT INCLUDE BUILDING CODE APPROVAL; FIRE CODE APPROVAL; OR BUILDING, DEMOLITION, OR RELOCATION PERMITS APPROVAL. A CITY DEMOLITION OR RELOCATION PERMIT CAN ONLY BE ISSUED ONCE THE HISTORIC REVIEW PROCESS IS COMPLETED.
3. ALL SIGNS MUST COMPLY WITH THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE.
4. THE OWNER IS RESPONSIBLE FOR ALL COSTS OF RELOCATION OF, OR DAMAGE TO, UTILITIES.
5. ADDITIONAL ELECTRIC EASEMENTS MAY BE REQUIRED AT A LATER DATE.
6. A SITE DEVELOPMENT PERMIT MUST BE ISSUED PRIOR TO AN APPLICATION FOR BUILDING PERMIT FOR NONCONSOLIDATED OR LAND USE COMMISSION APPROVED SITE PLANS.
7. WATER AND WASTEWATER SERVICE WILL BE PROVIDED BY THE CITY OF ROLLINGWOOD.
8. NO CERTIFICATE OF OCCUPANCY MAY BE ISSUED FOR THE PROPOSED RESIDENTIAL CONDOMINIUM PROJECT UNTIL THE OWNER OR OWNERS OF THE PROPERTY HAVE COMPLIED WITH CHAPTER 81 AND 82 OF THE PROPERTY CODE OF THE STATE OF TEXAS OR ANY OTHER STATUTES ENACTED BY THE STATE CONCERNING CONDOMINIUMS.
9. FOR CONSTRUCTION WITHIN THE RIGHT-OF-WAY, A R.O.W. EXCAVATION PERMIT IS REQUIRED.

COMPATIBILITY

1. HIGHLY REFLECTIVE MATERIALS WILL NOT BE USED. MATERIALS MAY NOT EXCEED 20% REFLECTIVITY. THIS REQUIREMENT SHALL NOT APPLY TO SOLAR PANELS OR TO COPPER OR PAINTED METAL ROOFS.
2. THE NOISE LEVEL OF MECHANICAL EQUIPMENT WILL NOT EXCEED 70 D.B.A. AT THE PROPERTY LINE ADJACENT TO RESIDENTIAL USES.
3. ALL EXTERIOR LIGHTING SHALL BE HOODED OR SHIELDED FROM THE VIEW OF ADJACENT RESIDENTIAL USES, OR PROPERTY ZONED RESIDENTIAL.
4. EXTERIOR LIGHTING ABOVE THE SECOND FLOOR IS PROHIBITED WHEN ADJACENT TO RESIDENTIAL PROPERTY.
5. ALL DUMPSTERS AND ANY PERMANENTLY PLACED REFUSE RECEPTACLES WILL BE LOCATED AT A MINIMUM OF TWENTY (20) FEET FROM A PROPERTY USED OR ZONED AS SF-5 OR MORE RESTRICTIVE.

FIRE DEPARTMENT

1. THE ROLLINGWOOD FIRE DEPARTMENT REQUIRES ASPHALT OR CONCRETE PAVEMENT PRIOR TO CONSTRUCTION AS AN "ALL-WEATHER DRIVING SURFACE."
2. HYDRANTS MUST BE INSTALLED WITH THE CENTER OF THE FOUR-INCH OPENING AT LEAST 18 INCHES ABOVE FINISHED GRADE. THE FOUR-INCH OPENING MUST FACE THE DRIVEWAY OR STREET WITH THREE- TO SIX-FOOT SETBACKS FROM THE CURBLINE(S). NO OBSTRUCTION IS ALLOWED WITHIN THREE FEET OF ANY HYDRANT AND THE FOUR-INCH OPENING MUST BE TOTALLY UNOBSTRUCTED FROM THE STREET.
3. TIMING OF INSTALLATION: WHEN FIRE PROTECTION FACILITIES ARE INSTALLED BY THE DEVELOPER, SUCH FACILITIES SHALL INCLUDE ALL SURFACE ACCESS ROADS WHICH SHALL BE INSTALLED AND MADE SERVICEABLE PRIOR TO AND DURING THE TIME OF CONSTRUCTION. WHERE ALTERNATIVE METHODS OF PROTECTION, AS APPROVED BY THE FIRE CHIEF, ARE PROVIDED, THE ABOVE MAY BE MODIFIED OR WAIVED.
4. ALL PERVIOUS/DECORATIVE PAVING SHALL BE ENGINEERED AND INSTALLED FOR 80,000 LB. LIVE-VEHICLE LOADS. ANY PERVIOUS/DECORATIVE PAVING WITHIN 100 FEET OF ANY BUILDING MUST BE APPROVED BY THE FIRE DEPARTMENT.
5. COMMERCIAL DUMPSTERS AND CONTAINERS WITH AN INDIVIDUAL CAPACITY OF 1.5 CUBIC YARDS OR GREATER SHALL NOT BE STORED OR PLACED WITHIN TEN FEET OF OPENINGS, COMBUSTIBLE WALLS, OR COMBUSTIBLE EAVE LINES. CITY OF ROLLINGWOOD | CONSOLIDATED SITE PLAN APPLICATION INSTRUCTIONS REV 7/19/2016 | PAGE 30 OF 38
6. FIRE LANES DESIGNATED ON SITE PLAN SHALL BE REGISTERED WITH CITY OF ROLLINGWOOD FIRE MARSHAL'S OFFICE AND INSPECTED FOR FINAL APPROVAL.
7. VERTICAL CLEARANCE REQUIRED FOR FIRE APPARATUS IS 14 FEET FOR FULL WIDTH OF ACCESS DRIVE.

GENERAL CONSTRUCTION NOTES:

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF ROLLINGWOOD MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

2. CONTRACTOR SHALL CALL TEXAS 811 (811 OR 1-800-344-8377) FOR UTILITY LOCATIONS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET R.O.W.

3. CONTRACTOR SHALL NOTIFY THE CITY OF ROLLINGWOOD TO SUBMIT REQUIRED DOCUMENTATION, PAY CONSTRUCTION INSPECTION FEES, AND TO SCHEDULE THE REQUIRED SITE AND SUBDIVISION PRE-CONSTRUCTION MEETING. THIS MEETING MUST BE HELD PRIOR TO ANY CONSTRUCTION ACTIVITIES WITHIN THE R.O.W. OR PUBLIC EASEMENTS. PLEASE VISIT HTTP://AUSTINTEXAS.GOV/PAGE/COMMERCIAL-SITE-AND-SUBDIVISION-INSPECTIONS FOR A LIST OF SUBMITTAL REQUIREMENTS, INFORMATION CONCERNING FEES, AND CONTACT INFORMATION.

4. FOR SLOPES OR TRENCHES GREATER THAN FIVE FEET IN DEPTH, A NOTE MUST BE ADDED STATING: "ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION." (OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 611 EAST 6TH STREET, ROLLINGWOOD TEXAS.)

5. ALL SITE WORK MUST ALSO COMPLY WITH ENVIRONMENTAL REQUIREMENTS.

6. UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS AND PRIOR TO THE FOLLOWING, THE ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DRAINAGE, FILTRATION AND DETENTION FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS; RELEASE OF THE CERTIFICATE OF OCCUPANCY BY THE DEVELOPMENT SERVICES DEPARTMENT (INSIDE THE CITY LIMITS); OR INSTALLATION OF AN ELECTRIC OR WATER METER (IN THE FIVE-MILE ETJ)

DEVELOPER INFORMATION

WESTERN HILLS ATHLETIC CLUB OWNER	(512) 327-6373 PHONE #
4801 ROLLINGWOOD DR, ROLLINGWOOD, TX 78746 OWNER ADDRESS	
CATHERINE SCOTT OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS	(512) 327-6373 PHONE #
JOSH MCKAY PERSON OR FIRM RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE	(512) 426-1483 PHONE #
JOSH MCKAY PERSON OR FIRM RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE	(512) 426-1483 PHONE #

AMERICANS WITH DISABILITIES ACT
THE CITY OF ROLLINGWOOD HAS REVIEWED THIS PLAN FOR COMPLIANCE WITH CITY DEVELOPMENT REGULATIONS ONLY. THE APPLICANT, PROPERTY OWNER, AND OCCUPANT OF THE PREMISES ARE RESPONSIBLE FOR DETERMINING WHETHER THE PLAN COMPLIES WITH ALL OTHER LAWS, REGULATIONS, AND RESTRICTIONS WHICH MAY BE APPLICABLE TO THE PROPERTY AND ITS USE.

BENCHMARK INFORMATION
COORDINATE BASIS: GRID AZIMUTH FOR TEXAS CENTRAL ZONE STATE PLANE COORDINATES, BASED ON GPS SOLUTIONS FROM THE NATIONAL GEODETIC SURVEY (NGS) ON-LINE POSITIONING USER SERVICE (OPUS).

BENCHMARKS:

B.M. #1 – SQUARE CUT ON B.O.C., NORTH SIDE OF ROLLINGWOOD DR.
+/-105 FEET WEST OF WALLIS DR.
ELEV.=628.77'

B.M. #3 – SQUARE CUT ON B.O.C. ON THE WEST SIDE OF WALLIS DR.
+/-190 FEET NORTH OF ROLLINGWOOD DR.
ELEV.=631.07'

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
WATER POLLUTION ABATEMENT PLAN
GENERAL CONSTRUCTION NOTES:

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
   - THE NAME OF THE APPROVED PROJECT;
   - THE ACTIVITY START DATE; AND
   - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.

2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN (WPAP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.

3. IF ANY SENSITIVE FEATURE(S) (CAVES, SOLUTION CAVITY, SINK HOLE, ETC.) IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT BE RESUMED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE APPROPRIATE PROTECTIVE MEASURES IN ORDER TO PROTECT ANY SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.

4. NO TEMPORARY OR PERMANENT HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.

5. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

6. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.

7. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS NOT LATER THAN WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.

8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.

9. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON-SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER SITE.

10. IF PORTIONS OF THE SITE WILL HAVE A TEMPORARY OR PERMANENT CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.

11. THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
   - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
   - THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
   - THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.

12. THE HOLDER OF ANY APPROVED EDWARD AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
   A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;
   B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;
   C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

AUSTIN REGIONAL OFFICE
12100 PARK 35 CIRCLE, BUILDING A
AUSTIN, TEXAS 78753-1808
PHONE (512) 339-2929
FAX (512) 339-3795

SAN ANTONIO REGIONAL OFFICE
14250 JUDSON ROAD
SAN ANTONIO, TEXAS 78233-4480
PHONE (210) 490-3096
FAX (210) 545-4329

STATE OF TEXAS
TOMAS M. RODRIGUEZ
119179
LICENSED
PROFESSIONAL ENGINEER
TBPE FH 1416
10/4/2024

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9001 N IH35
Suite 102
Austin, Texas 78753
p: 512.453.0767
f: 512.453.1734

NO.	DATE	DESCRIPTION	BY

0 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

GENERAL NOTES

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

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2 OF 30

Files: \\mwmdata\MWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\001 Notes.dwg 22x34

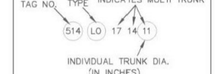
A SURVEY OF ALL OF LOT 1, WESTERN HILLS ATHLETIC CLUB ADDITION, A SUBDIVISION OF RECORD IN TRAVIS COUNTY, TEXAS ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN VOLUME 79, PAGE 355 OF THE THE PLAT RECORDS OF TRAVIS COUNTY, TEXAS, SAVE AND EXCEPT A 2,411 SQUARE FEET TRACT DESCRIBED IN VOLUME 11901, PAGE 1260 OF THE REAL PROPERTY RECORDS OF TRAVIS COUNTY, TEXAS.

LOCATION MAP
NOT TO SCALE

TREE LIST					
16901 HB 7 4	20027 CE 8	20055 LO 8 7	20082 LO 21	20118 CDR 7	20144 LO 10 9
16902 CE 6 4	20028 CE 9	20056 CDR 13	20083 LO 17	20119 CDR 7	20145 LO 13
16903 LO 9	20029 CB 14	20057 LO 16 12	20084 LO 12	20120 CDR 9	20146 CDR 10
16904 LO 7	20030 CB 14	20058 CDR 14	20086 LO 12	20121 LO 7	20147 LO 6
16905 LO 9	20032 HB 13	20059 LO 13	20088 LO 14	20122 CDR 6	20148 LO 18 13
16906 LO 8	20033 CB 9	20060 CDR 7	20089 LO 11	20123 CDR 8	20149 CE 10 5
16907 CE 7 4	20034 CB 11 7 5	20061 CE 6	20090 LO 16	20124 CDR 6	20150 CE 14
16908 LO 13	20035 CB 7	20062 CDR 8	20093 LO 18	20125 LO 13	20151 CB 10
16909 LO 7	20036 CB 8	20063 LO 17	20094 LO 12	20126 LO 9	20152 CB 13
16910 CB 9	20038 CB 15	20064 CDR 10	20095 LO 10	20127 LO 8	20155 LIG 9 6 6
16911 CB 7	20039 CDR 10	20065 PO 19 16	20096 LO 11	20128 CDR 6	20158 CB 8
16912 LIG 8 6	20040 CE 8	20066 CDR 8	20097 LO 9	20129 CDR 12	20159 CB 20
16913 BE 8	20041 CE 13	20067 LO 7	20098 LO 12	20130 CDR 7	20160 CE 10
16914 BE 6	20042 CE 12	20068 LO 13	20099 LO 15	20131 CDR 7	20161 CE 9 8
16915 BE 6	20043 CE 10 8	20069 LO 11 8	20100 LO 12	20132 CDR 7	20162 LO 20
16916 WLNT 7	20044 LO 10	20070 CDR 7	20101 LO 13	20133 CE 9	20163 CE 11
16917 WLNT 6	20045 LO 8	20071 CE 6	20102 LO 19 17	20134 CE 10	20164 LO 22
16918 WLNT 6	20046 LO 13	20072 CB 7	20103 LO 20	20135 LO 13 10	20165 LO 22
20016 LO 23 21 19 19	20047 LO 12	20074 LO 15	20105 CE 15	20136 HB 6	20166 LO 21
20017 CE 18	20048 LO 13	20075 LO 18	20106 LO 10	20137 CDR 6	20167 LO 18
20018 LO 20	20049 HB 8	20076 LO 15	20107 LO 12	20138 CE 8	20168 LO 24
20021 LO 19	20050 CE 10	20077 LO 17	20108 LO 7	20139 CDR 8	20169 LO 19
20023 PEC 17	20051 LO 11	20078 LO 17	20109 LO 12	20140 HB 9	20170 CE 17
20024 LO 18	20052 LO 12	20079 LO 19	20114 CE 9	20141 PEC 11	20171 LO 19 19
20025 LO 13	20053 LO 10	20080 LO 18	20116 CDR 10	20142 PEC 10	20173 CE 14
20026 LO 8 5	20054 LO 17 16	20081 LO 11	20117 LO 9	20143 CDR 6	

TREE LEGEND			
BE –	BOX ELDER	LIG –	LIGUSTRUM
CB –	CHINA BERRY	LO –	LIVE OAK
CDR –	CEDAR	PEC –	PECAN
CE –	CEDAR ELM	WLNT –	WALNUT
HB –	HACKBERRY		

TREE INDEX



CRITICAL ROOT ZONES (TREE CIRCLES) ARE SHOWN USING THE COA FORMULA FOR SINGLE AND MULTI TRUNK TREES.

BENCHMARK NOTE:

B.M. #1 – SQUARE CUT ON B.O.C., NORTH SIDE OF ROLLINGWOOD DR. +/–105 FEET WEST OF WALLIS DR.
ELEV.=628.77'

B.M. #3 – SQUARE CUT ON B.O.C. ON THE WEST SIDE OF WALLIS DR. +/–190 FEET NORTH OF ROLLINGWOOD DR.
ELEV.=631.07'

MANHOLE AND INLET NOTE:

THIS SURVEY SHOWS FIELD MEASURED SIZES AND DEPTHS AS OBSERVED FROM GROUND LEVEL OPENINGS. EXACT MEASUREMENTS AND DEPTHS, PARTICULARLY IN CRITICAL AREAS, SHOULD BE VERIFIED WITH UTILITY RECORD MAPS AND/OR FIELD VERIFICATION PRIOR TO FINAL PLANNING OR CONSTRUCTION.

LEGEND

- 1/2" REBAR FOUND
- CALCULATED POINT
- 3/4" IRON PIPE FOUND
- NAIL FOUND
- COTTON SPINDLE FOUND
- BENCHMARK LOCATION
- WATER METER
- WATER VALVE
- FIRE HYDRANT
- SPRINKLER CONTROL VALVE
- UTILITY POLE
- GUY WIRE
- OVERHEAD UTILITIES
- LIGHT POLE
- WASTEWATER CLEANOUT
- WASTEWATER MANHOLE
- STORMSEWER MANHOLE
- HANDICAP PARKING SPACE
- AC PAD
- GAS UTILITY
- ELECTRIC UTILITY
- SIGN
- EDGE OF PAVEMENT
- WROUGHT IRON FENCE
- CHAIN LINK FENCE
- PUMP BOX
- PUMP

CURVE TABLE							
NO.	DELTA	RADIUS	TAN	ARC	CHORD	BEARING	(RECORD CHORD)
C1	4°35'35"	315.81'	12.67'	25.32'	25.31'	S10°15'58"W	(S11°47'W 25.26')
C2	29°33'56"	122.57'	32.34'	63.25'	62.55'	S02°21'10"E	(S00°43'E 62.57')

FLOOD–PLAIN NOTE:

The tract shown hereon lies within Zone "X" (areas determined to be outside 500–year flood–plain), as identified by the Federal Emergency Management Agency, Federal Insurance Administration, as shown on map no. 48453C0445J, dated January 06, 2016, for Travis County, Texas and incorporated areas. If this site is not within an identified special flood hazard area, this flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage. This flood statement shall not create liability on the part of the surveyor.

TITLE COMMITMENT NOTE:

This Survey was prepared without the benefit of a Commitment for Title, and may be subject to additional easements or restrictions not shown hereon. No additional easement research was done for the purpose of this survey.

NOTE FROM PREVIOUS SURVEY (9/26/07):

The Travis CAD map 01_0909 (01/04/2006) shows what appears to be additional R.O.W. for Rollingwood Drive and Wallis Drive. There was no monumented evidence in the field of a R.O.W. dedication along the north line of Rollingwood Drive. After researching Travis CAD and the Travis County Clerk records, we were not able to locate any documents reflecting additional street frontage conveyed to the City of Rollingwood. Since no title research was provided by the client, there was not enough data to accurately determine the position of the intersection of the north R.O.W. of Rollingwood Drive and the west R.O.W. of Wallis Drive, so the position is represented on the map by a calculated point for the purposes of this survey.

SURVEYOR'S CERTIFICATE:

CERTIFIED TO:
Julie Martinez
Western Hills Athletic Club

PROPERTY ADDRESS: Rollingwood Drive @ Wallis Drive

DATE OF SURVEY: 09/26/07; Topographic and Tree Survey Udated 09/20/17, Updated 4/27/18

BEARING BASIS: Grid azimuth for Texas Central Zone state plane coordinates, based on GPS solutions from The National Geodetic Survey (NGS) On–line Positioning User Service (OPUS).

ATTACHMENTS: none

I hereby certify that a survey of the property shown hereon was actually made upon the ground under my direction and supervision on the date shown, and that to the best of my professional knowledge and belief: there are no apparent encroachments, overlapping of improvements, discrepancies, deed line conflicts, visible utility lines or roads in place, except as shown hereon, and that this property abuts or adjoins a dedicated road right–of–way or access easement, unless noted hereon.

Robert C. Watts, Jr. Date
Registered Professional Land Surveyor
State of Texas No. 4995

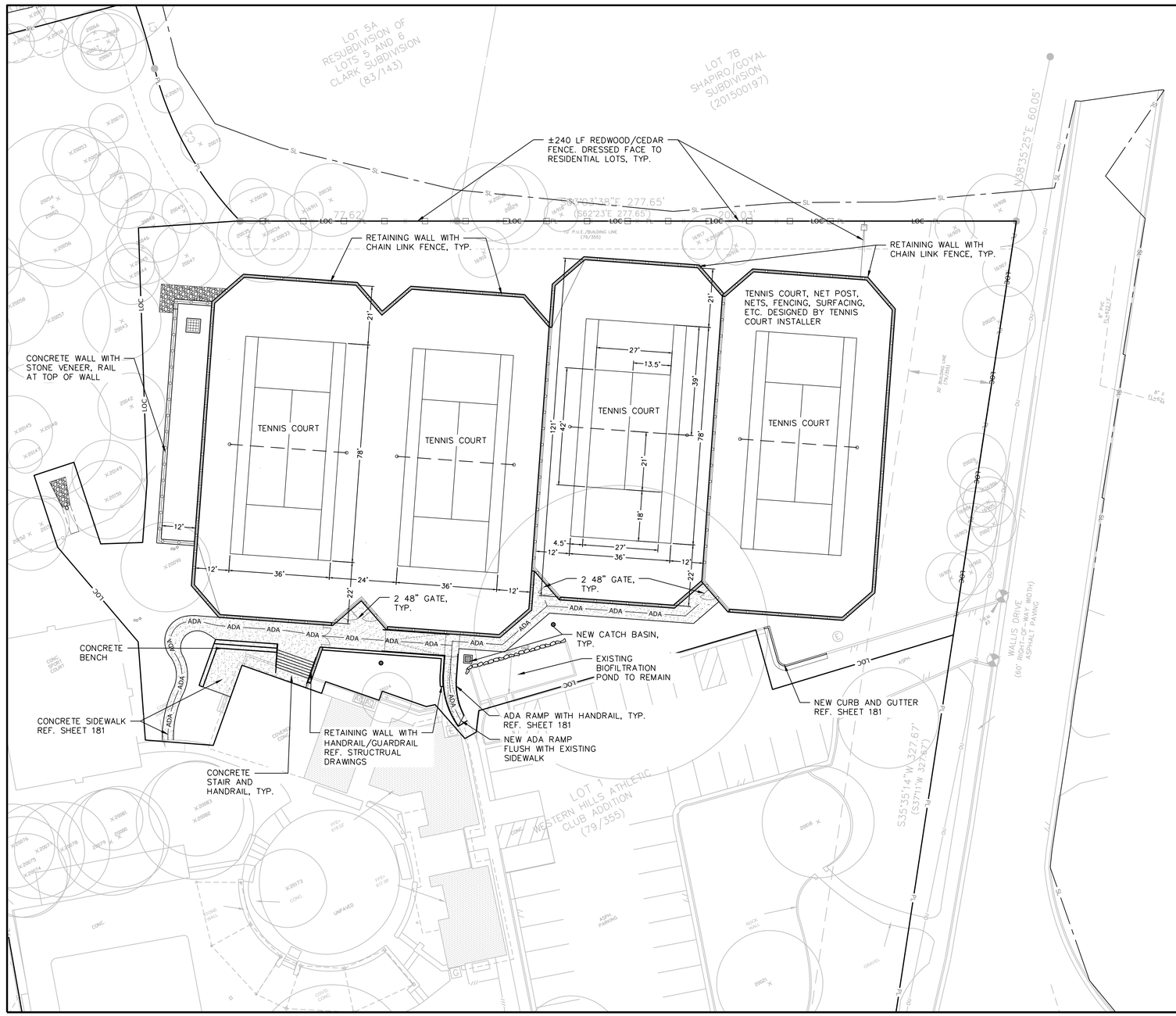
5.10.18

STATE OF TEXAS
ROBERT C. WATTS, JR.
4995
REGISTERED
PROFESSIONAL
LAND SURVEYOR

Robert C. Watts, Jr.
R.P.L.S. No. 4995

Chaparral
Professional Land Surveying, Inc.
Surveying and Mapping
3500 McCall Lane
Austin, Texas 78744
512–443–1724
Firm No. 10124500

PROJECT NO.: 585–001
DRAWING NO.: 585–001–BASE
PLOT DATE: 05/10/18
PLOT SCALE: 1"=30'
DRAWN BY: RGH/MAW/EBD
SHEET 01 OF 01



1" = 20'-0"

ORIGINAL IS ONE INCH

SCALE

SITE/GEOMETRY LEGEND

ADA	ADA ROUTE
PL	PROPERTY LINE
SL	SURVEY LIMIT
	CONCRETE SIDEWALK
	LANDSCAPE INLET
	GRATE INLET

SITE PLAN NOTES:
1. THE LOC SHALL SERVE AS THE BOUNDARY FOR LEED AND/OR AEGB PURPOSES.

SITE PLAN RELEASE NOTES:
1. ALL IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE RELEASED SITE PLAN. ANY ADDITIONAL IMPROVEMENTS WILL REQUIRE SITE PLAN AMENDMENT AND APPROVAL OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT.
2. APPROVAL OF THE SITE PLAN DOES NOT INCLUDE BUILDING APPROVAL; FIRE CODE APPROVAL; OR BUILDING, DEMOLITION, OR RELOCATION PERMITS APPROVAL. A CITY DEMOLITION OR RELOCATION PERMIT CAN ONLY BE ISSUED ONCE THE HISTORIC REVIEW PROCESS IS COMPLETED.
3. A DEVELOPMENT PERMIT MUST BE ISSUED PRIOR TO AN APPLICATION FOR BUILDING PERMIT FOR NON-CONSOLIDATED OR COMMISSION-APPROVED SITE PLANS.
8. ANY EXISTING STRUCTURES SHOWN TO BE REMOVED WILL REQUIRE A DEMOLITION PERMIT FROM THE CITY OF AUSTIN PLANNING AND DEVELOPMENT REVIEW DEPARTMENT.
9. FOR CONSTRUCTION IN THE RIGHT-OF-WAY, A ROW EXCAVATION PERMIT IS REQUIRED.

COMPATIBILITY STANDARD NOTES:
1. HIGHLY REFLECTIVE MATERIALS WILL NOT BE USED. MATERIALS MAY NOT EXCEED 20% REFLECTIVITY. THIS REQUIREMENT SHALL NOT APPLY TO SOLAR PANELS OR TO COPPER OR PAINTED METAL ROOFS.
2. THE NOISE LEVEL OF MECHANICAL EQUIPMENT WILL NOT EXCEED 70 DBA AT THE PROPERTY LINE ADJACENT TO RESIDENTIAL USES.
3. ALL EXTERIOR LIGHTING WILL BE HOODED OR SHIELDED FROM THE VIEW OF ADJACENT RESIDENTIAL USES OR PROPERTY.
4. ALL DUMPSTERS AND ANY PERMANENTLY PLACED REFUSE RECEPTACLES WILL BE LOCATED AT A MINIMUM OF 20 FEET FROM A PROPERTY USED OR ZONED AS SF-5 OR MORE RESTRICTIVE (SECTION 25-2-1067).

SUBCHAPTER E NOTES:
1. SCREENING FOR SOLID WASTE COLLECTION AND LOADING AREAS SHALL BE THE SAME AS, OR OF EQUAL QUALITY TO, PRINCIPAL BUILDING MATERIAL, IN ACCORDANCE WITH SUBCHAPTER 2,6.2.
2. ALL EXTERIOR LIGHTING WILL BE FULL CUT-OFF AND FULLY SHIELDED IN COMPLIANCE WITH SUBCHAPTER E 2.5 (REFER TO FIGURE 42 BELOW). ALL SITE LIGHTING TO BE LOCATED ON THE BUILDING WILL BE IN COMPLIANCE WITH SUBCHAPTER E.2.5, AND WILL BE REVIEWED DURING BUILDING PLAN REVIEW. ANY CHANGE OR SUBSTITUTION OF LAMP/LIGHT FIXTURES SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL IN ACCORDANCE WITH SECTION 2.5.2.E.*.

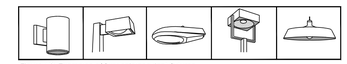


Figure 42: Examples of fully-shielded light fixtures

STATE OF TEXAS
TOMAS M. RODRIGUEZ
119179
LICENSED
PROFESSIONAL ENGINEER
TBPE FH 1416
10/4/2024

REGISTERED LANDSCAPE ARCHITECT
DAVID J. CAZARES
1871
STATE OF TEXAS
04 October 2024

mwm DesignGroup
TBPELS F-1416 10065600
TBAE 1452
HUB
9001 N IH35
Suite 102
Austin, Texas 78753
p: 512.453.0767
f: 512.453.1734

NO.	DATE	DESCRIPTION	BY

0 1"

The bar above measures one inch on the original drawing. Adjust scales accordingly.

SITE PLAN

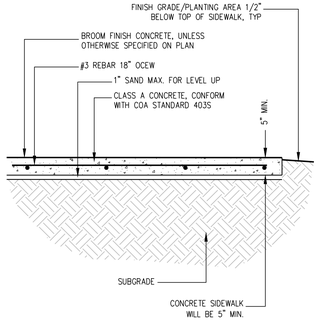
Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

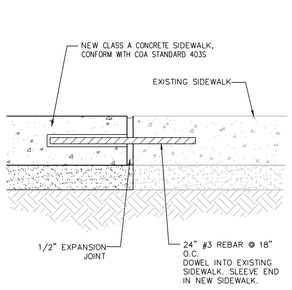
101

4 OF 30

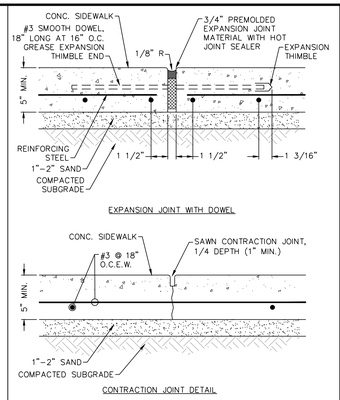
Files: \\mwmdata\MWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\101 Site Plan.dwg 22x34



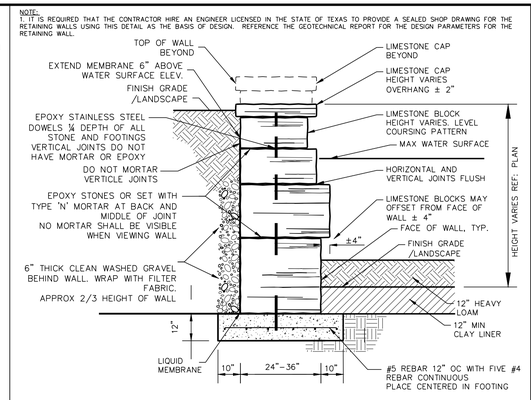
1 181 **CONCRETE SIDEWALK**
SCALE: NTS



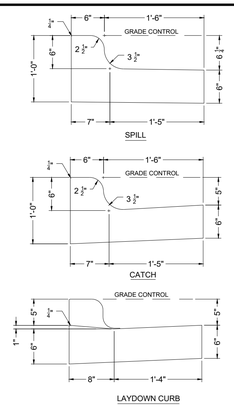
2 181 **NEW SIDEWALK CONNECTION AT EXISTING SIDEWALK**
SCALE: NTS



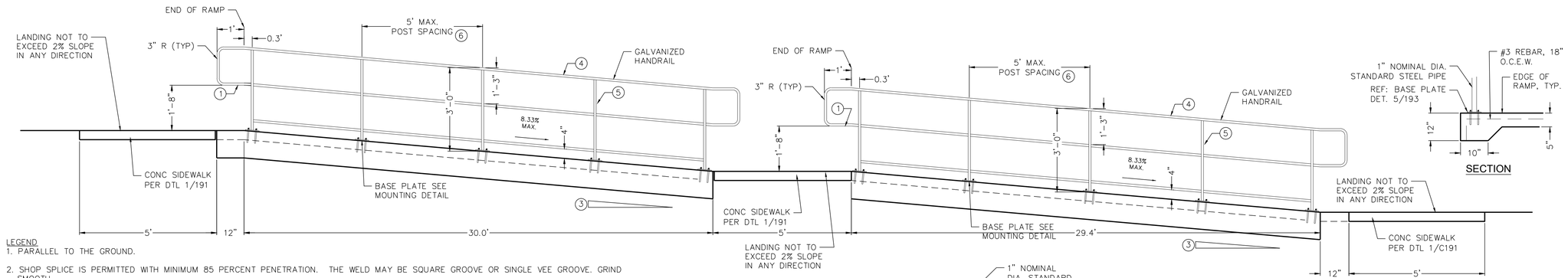
3 181 **SIDEWALK JOINT**
SCALE: NTS



4 181 **LIMESTONE LANDSCAPE WALL**
SCALE: NTS



5 181 **CURB AND GUTTER SECTION**
SCALE: NTS



LEGEND
1. PARALLEL TO THE GROUND.
2. SHOP SPLICE IS PERMITTED WITH MINIMUM 85 PERCENT PENETRATION. THE WELD MAY BE SQUARE GROOVE OR SINGLE VEE GROOVE. GRIND SMOOTH.
3. SEE GRADING PLAN FOR RAMP SLOPE. MAXIMUM RAMP SLOPE WILL NOT EXCEED 8.3 PERCENT.
4. 1" DIA EXTRA HEAVY PIPE (1.315" O.D. , 0.179" WALL THICKNESS). PARALLEL TO RAMP/ SIDEWALK. PROVIDE HOLES AS NEEDED IN 1" DIA PIPE FOR GALVANIZING DRAINAGE AND VENTING.
5. 1" DIA STANDARD PIPE (1.315" O.D. , 0.179" WALL THICKNESS). PLUMB ALL POSTS. SEE POST MOUNT DETAIL FOR CRIMPING AND TRIMMING POST TO FIT DIA OF TOP RAIL. PROVIDE HOLES AS NEEDED IN POST FOR GALVANIZING DRAINAGE AND VENTING.
6. CENTER LINE ⅝ DIA ROUND BAR EQ SPACES AT 4 ½ " MAX. PLUMB ALL PICKETS.

6 181 **ADA RAMP WITH HANDRAIL**
SCALE: NTS

STATE OF TEXAS — TOMAS M. RODRIGUEZ — 119179 — LICENSED — CIVIL ENGINEER
TBPE FIRM 1416
10/4/2024

REGISTERED LANDSCAPE ARCHITECT — DAVID J. CAZARES — 1871 — STATE OF TEXAS
04 October 2024

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Austin, Texas 78753
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f: 512.453.1734

NO.	DATE	DESCRIPTION	BY

0 — 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

SITE DETAILS

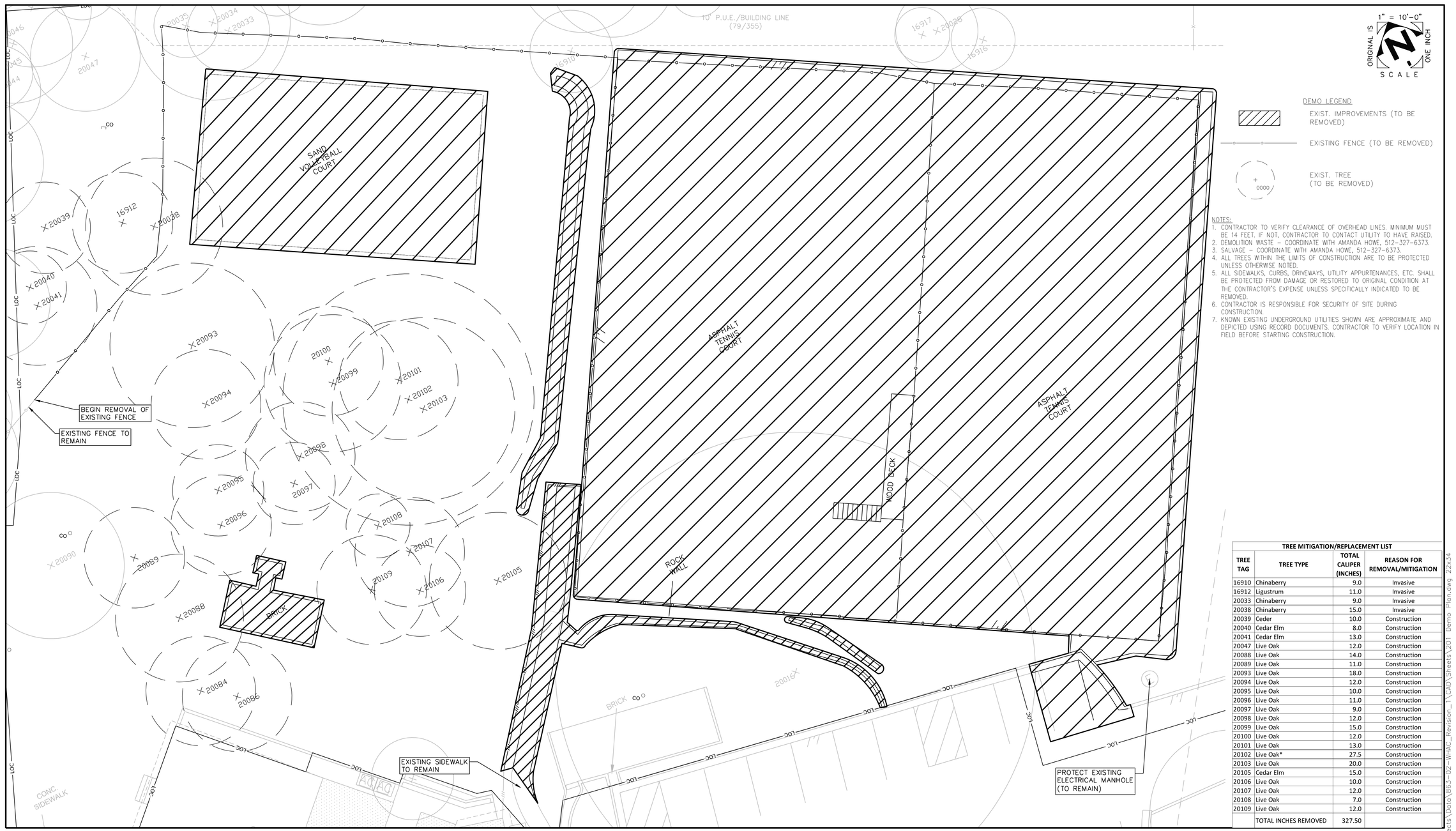
Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

181

5 OF 30

File: \\mwmdata\MWMProjects\Data\863-02_WHAC_Revision_1\CAD\Sheets\191 Site Details.dwg 22x34



1" = 10'-0"
ORIGINAL IS ONE INCH
SCALE

DEMO LEGEND

EXIST. IMPROVEMENTS (TO BE REMOVED)

EXISTING FENCE (TO BE REMOVED)

EXIST. TREE (TO BE REMOVED)

NOTES:
1. CONTRACTOR TO VERIFY CLEARANCE OF OVERHEAD LINES. MINIMUM MUST BE 14 FEET. IF NOT, CONTRACTOR TO CONTACT UTILITY TO HAVE RAISED.
2. DEMOLITION WASTE – COORDINATE WITH AMANDA HOWE, 512-327-6373.
3. SALVAGE – COORDINATE WITH AMANDA HOWE, 512-327-6373.
4. ALL TREES WITHIN THE LIMITS OF CONSTRUCTION ARE TO BE PROTECTED UNLESS OTHERWISE NOTED.
5. ALL SIDEWALKS, CURBS, DRIVEWAYS, UTILITY APPURTENANCES, ETC. SHALL BE PROTECTED FROM DAMAGE OR RESTORED TO ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE UNLESS SPECIFICALLY INDICATED TO BE REMOVED.
6. CONTRACTOR IS RESPONSIBLE FOR SECURITY OF SITE DURING CONSTRUCTION.
7. KNOWN EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND DEPICTED USING RECORD DOCUMENTS. CONTRACTOR TO VERIFY LOCATION IN FIELD BEFORE STARTING CONSTRUCTION.

TREE MITIGATION/REPLACEMENT LIST

TREE TAG	TREE TYPE	TOTAL CALIPER (INCHES)	REASON FOR REMOVAL/MITIGATION
16910	Chinaberry	9.0	Invasive
16912	Ligustrum	11.0	Invasive
20033	Chinaberry	9.0	Invasive
20038	Chinaberry	15.0	Invasive
20039	Ceder	10.0	Construction
20040	Cedar Elm	8.0	Construction
20041	Cedar Elm	13.0	Construction
20047	Live Oak	12.0	Construction
20088	Live Oak	14.0	Construction
20089	Live Oak	11.0	Construction
20093	Live Oak	18.0	Construction
20094	Live Oak	12.0	Construction
20095	Live Oak	10.0	Construction
20096	Live Oak	11.0	Construction
20097	Live Oak	9.0	Construction
20098	Live Oak	12.0	Construction
20099	Live Oak	15.0	Construction
20100	Live Oak	12.0	Construction
20101	Live Oak	13.0	Construction
20102	Live Oak*	27.5	Construction
20103	Live Oak	20.0	Construction
20105	Cedar Elm	15.0	Construction
20106	Live Oak	10.0	Construction
20107	Live Oak	12.0	Construction
20108	Live Oak	7.0	Construction
20109	Live Oak	12.0	Construction
	TOTAL INCHES REMOVED	327.50	

STATE OF TEXAS
TOMAS M. RODRIGUEZ
119179
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10/4/2024

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NO.	DATE	DESCRIPTION	BY

0 1"
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DEMOLITION PLAN

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

201

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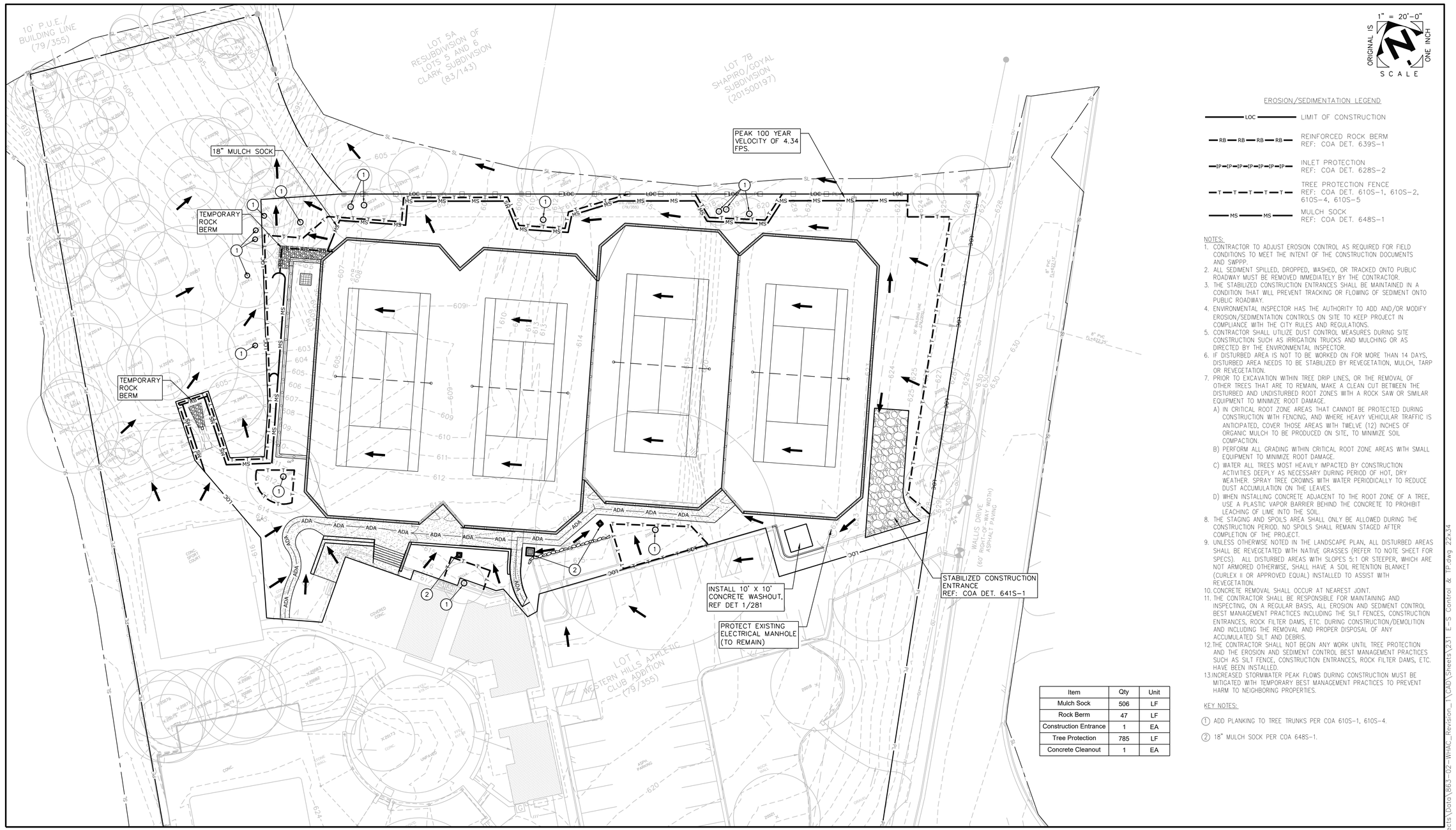

EROSION/SEDIMENTATION LEGEND

- LOC — LIMIT OF CONSTRUCTION
- RB RB RB RB — REINFORCED ROCK BERM REF: COA DET. 639S-1
- IP IP IP IP IP IP IP IP — INLET PROTECTION REF: COA DET. 628S-2
- T T T T T T — TREE PROTECTION FENCE REF: COA DET. 610S-1, 610S-2, 610S-4, 610S-5
- MS MS — MULCH SOCK REF: COA DET. 648S-1

NOTES:

1. CONTRACTOR TO ADJUST EROSION CONTROL AS REQUIRED FOR FIELD CONDITIONS TO MEET THE INTENT OF THE CONSTRUCTION DOCUMENTS AND SWPPP.
2. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
3. THE STABILIZED CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY.
4. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN COMPLIANCE WITH THE CITY RULES AND REGULATIONS.
5. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
6. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP OR REVEGETATION.
7. PRIOR TO EXCAVATION WITHIN TREE DRIP LINES, OR THE REMOVAL OF OTHER TREES THAT ARE TO REMAIN, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT TO MINIMIZE ROOT DAMAGE.
   A) IN CRITICAL ROOT ZONE AREAS THAT CANNOT BE PROTECTED DURING CONSTRUCTION WITH FENCING, AND WHERE HEAVY VEHICULAR TRAFFIC IS ANTICIPATED, COVER THOSE AREAS WITH TWELVE (12) INCHES OF ORGANIC MULCH TO BE PRODUCED ON SITE, TO MINIMIZE SOIL COMPACTION.
   B) PERFORM ALL GRADING WITHIN CRITICAL ROOT ZONE AREAS WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE.
   C) WATER ALL TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES DEEPLY AS NECESSARY DURING PERIOD OF HOT, DRY WEATHER. SPRAY TREE CROWNS WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.
   D) WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, USE A PLASTIC VAPOR BARRIER BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE SOIL.
8. THE STAGING AND SPOILS AREA SHALL ONLY BE ALLOWED DURING THE CONSTRUCTION PERIOD. NO SPOILS SHALL REMAIN STAGED AFTER COMPLETION OF THE PROJECT.
9. UNLESS OTHERWISE NOTED IN THE LANDSCAPE PLAN, ALL DISTURBED AREAS SHALL BE REVEGETATED WITH NATIVE GRASSES (REFER TO NOTE SHEET FOR SPECS). ALL DISTURBED AREAS WITH SLOPES 5:1 OR STEEPER, WHICH ARE NOT ARMORED OTHERWISE, SHALL HAVE A SOIL RETENTION BLANKET (CURLEX II OR APPROVED EQUAL) INSTALLED TO ASSIST WITH REVEGETATION.
10. CONCRETE REMOVAL SHALL OCCUR AT NEAREST JOINT.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND INSPECTING, ON A REGULAR BASIS, ALL EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES INCLUDING THE SILT FENCES, CONSTRUCTION ENTRANCES, ROCK FILTER DAMS, ETC. DURING CONSTRUCTION/DEMOLITION AND INCLUDING THE REMOVAL AND PROPER DISPOSAL OF ANY ACCUMULATED SILT AND DEBRIS.
12. THE CONTRACTOR SHALL NOT BEGIN ANY WORK UNTIL TREE PROTECTION AND THE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES SUCH AS SILT FENCE, CONSTRUCTION ENTRANCES, ROCK FILTER DAMS, ETC. HAVE BEEN INSTALLED.
13. INCREASED STORMWATER PEAK FLOWS DURING CONSTRUCTION MUST BE MITIGATED WITH TEMPORARY BEST MANAGEMENT PRACTICES TO PREVENT HARM TO NEIGHBORING PROPERTIES.

Item	Qty	Unit
Mulch Sock	506	LF
Rock Berm	47	LF
Construction Entrance	1	EA
Tree Protection	785	LF
Concrete Cleanout	1	EA

KEY NOTES:

(1) ADD PLANKING TO TREE TRUNKS PER COA 610S-1, 610S-4.

(2) 18" MULCH SOCK PER COA 648S-1.

STATE OF TEXAS
TOMAS M. RODRIGUEZ
119179
REGISTERED PROFESSIONAL ENGINEER
TBPE FM 1416
10/4/2024

mwm Design Group
TBPELS F-1416 10065600
TBAE 1452
HUB
9001 N IH35
Suite 102
Austin, Texas 78753
p: 512.453.0767
f: 512.453.1734

NO.	DATE	DESCRIPTION	BY

0 — 1"

The bar above measures one inch on the original drawing. Adjust scales accordingly.

EROSION-SEDIMENTATION CONTROL & TREE PROTECTION PLAN

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

231

7 OF 30

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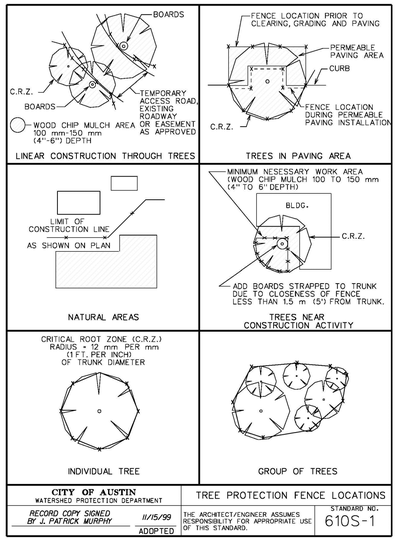
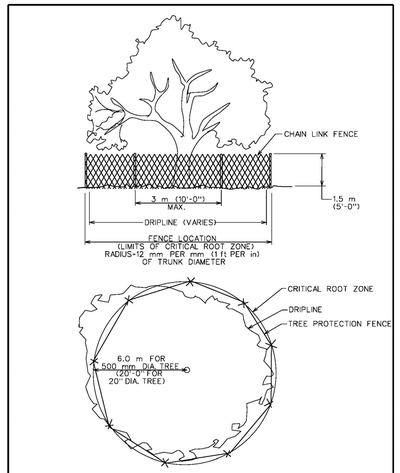
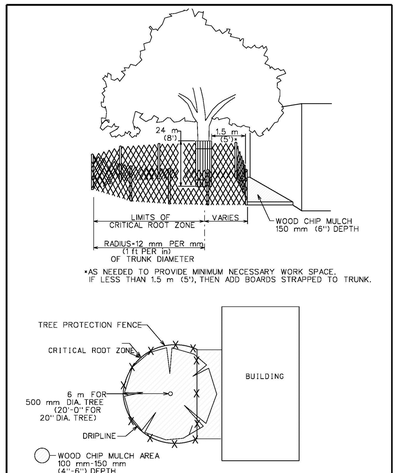


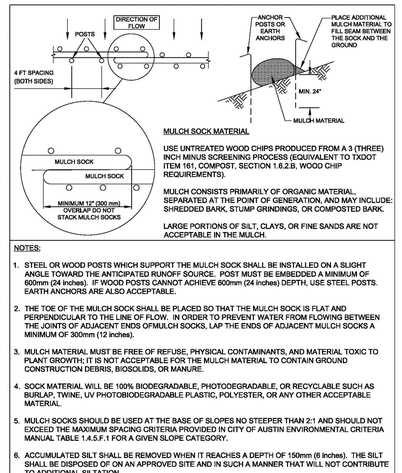
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROTECTION FENCE LOCATIONS	
RECORD COPY SIGNED BY J. PATRICK MURPHY	11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-1



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROPTECTION FENCE TYPE A - CHAIN LINK	
RECORD COPY SIGNED BY J. PATRICK MURPHY	11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-2



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TREE PROTECTION FENCE MODIFIED TYPE A - CHAIN LINK	
RECORD COPY SIGNED BY J. PATRICK MURPHY	11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-4



MULCH SOCK MATERIAL

USE UNTREATED WOOD CHIPS PRODUCED FROM A 3 (THREE) INCH MINUS SCREENING PROCESS (EQUIVALENT TO TXDOT ITEM 161, COMPOST, SECTION 1.6.2.B, WOOD CHIP REQUIREMENTS).

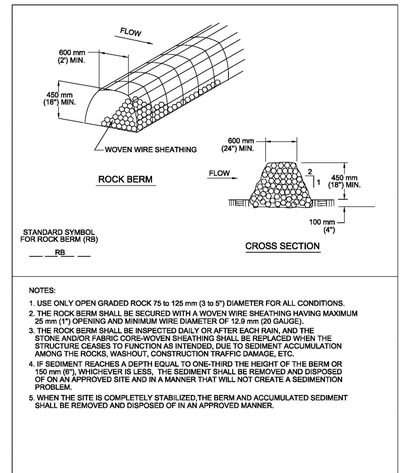
MULCH CONSISTS PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, OR COMPOSTED BARK.

LARGE PORTIONS OF SILT, CLAYS, OR FINE SANDS ARE NOT ACCEPTABLE IN THE MULCH.

NOTES:

1. STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 inches). IF WOOD POSTS CANNOT ACHIEVE 600mm (24 inches) DEPTH, USE STEEL POSTS. EARTH ANCHORS ARE ALSO ACCEPTABLE.
2. THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OFMULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 inches).
3. MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH; IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.
4. SOCK MATERIAL WILL BE 100% BIODEGRADABLE, PHOTODEGRADABLE, OR RECYCLABLE SUCH AS BURLAP, TWINE, UV PHOTOBIODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL.
5. MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1 AND SHOULD NOT EXCEED THE MAXIMUM SPACING CRITERIA PROVIDED IN CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL TABLE 1.4.5.F.1 FOR A GIVEN SLOPE CATEGORY.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		MULCH SOCK	
RECORD COPY SIGNED BY MORGAN BYARS	08/24/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 648S-1



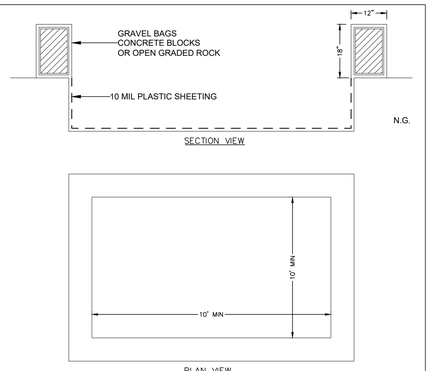
STANDARD SYMBOL FOR ROCK BERM (RB)

RB

NOTES:

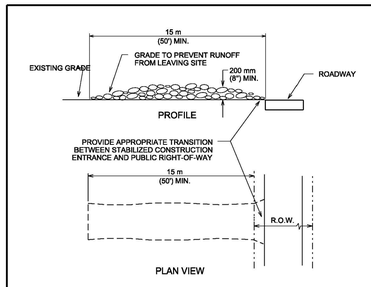
1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED,THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		ROCK BERM	
RECORD COPY SIGNED BY MORGAN BYARS	8/24/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 639S-1



1. THE EXCAVATION FOR THE CONCRETE TRUCK WASHOUT SHALL BE A MINIMUM OF 10 FEET WIDE AND OF SUFFICIENT LENGTH AND DEPTH TO ACCOMMODATE 7 GALLONS OF WASHOUT WATER AND CONCRETE PER TRUCK PER DAY AND/OR 50 GALLONS OF WASHOUT WATER AND CONCRETE PER PUMP TRUCK PER DAY.
2. IN THE EVENT THAT THE CONCRETE TRUCK WASHOUT IS CONSTRUCTED ABOVE GROUND, IT SHALL BE 10 FEET WIDE AND 10 FEET LONG WITH THE SAME REQUIREMENTS FOR CONTAINMENT AS DESCRIBED IN ITEM 1.
3. THE CONTAINMENT AREA SHALL BE LINED WITH 10 MIL PLASTIC SHEETING WITHOUT HOLES OR TEARS. WHERE THERE ARE SEAMS, THESE SHALL BE SECURED ACCORDING TO MANUFACTURERS DIRECTIONS.
4. THE BERM CONSISTING OF GRAVEL BAGS, CONCRETE BLOCKS OR OPEN GRADED ROCK SHALL BE NO LESS THAN 18 INCHES HIGH AND NO LESS THAN 12 INCHES WIDE.
5. THE PLASTIC SHEETING SHALL BE OF SUFFICIENT SIZE SO THAT IT WILL OVERLAP THE TOP OF THE CONTAINMENT AREA AND BE WRAPPED AROUND THE GRAVEL BAGS, CONCRETE BLOCKS OR OPEN GRADED ROCK AT LEAST 2 TIMES.
6. THE GRAVEL BAGS OR CONCRETE BLOCKS SHALL BE PLACED ABUTTING EACH OTHER TO FORM A CONTINUOUS BERM AROUND THE OUTER PERIMETER OF THE CONTAINMENT AREA.
7. THE WASHOUT MATERIAL IN TEH CONTAINMENT AREA SHALL NOT EXCEED 50% OF CAPACITY AT ANY ONE TIME.
8. SOLIDS SHALL BE REMOVED FROM CONTAINMENT AREA AND DISPOSED OF PROPERLY, ANY DAMAGE TO THE PLASTIC SHEETING SHALL BE REPAIRED OR SHEETING REPLACED BEFORE THE NEXT USE.

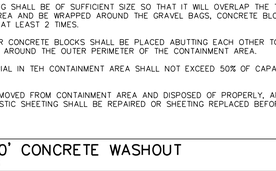
1	10' x 10' CONCRETE WASHOUT
281	SCALE: NTS



NOTES:

1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		STABILIZED CONSTRUCTION ENTRANCE	
RECORD COPY SIGNED BY J. PATRICK MURPHY	5/23/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 641S-1



TBPE FH 1416
10/4/2024

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NO.	DATE	DESCRIPTION	BY

0 1"

The bar above measures one inch on the original drawing. Adjust scales accordingly.

EROSION-SEDIMENTATION CONTROL & TREE PROTECTION DETAILS

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

281

8 OF 30

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GRADING LEGEND

000	PROP. CONTOUR
	1/2 FOOT PROP. CONTOUR
ADA	ADA ROUTE
	PROP. RETAINING WALL
	PROP. RETAINING WALL AT GRADE
000.00	SPOT ELEVATION
TC 000.00	TOP OF CURB ELEVATION
TP 000.00	TOP OF WALL AT GRADE ELEVATION
TW 000.00	TOP OF WALL ELEVATION
TG 000.00	TOP OF GRATE ELEVATION

NOTES:
1. NEW PAVEMENT SHALL ALIGN WITH EXISTING PAVEMENT, VERTICALLY AND HORIZONTALLY. PONDING AT JOINTS IS NOT ACCEPTABLE.
2. ALL ACCESSIBLE PARKING SPACES, ROUTES, CURB RAMPS, SIGNAGE, ETC. SHALL FULLY COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE TEXAS ACCESSIBILITY STANDARDS AND ADA.
3. REFER TO EXISTING SURVEY FOR HORIZONTAL & VERTICAL CONTROL.
4. ELEVATIONS SHOWN ARE TO TOP OF SURFACE. CONTRACTOR WILL BE RESPONSIBLE FOR ESTABLISHING SUBGRADE ELEVATIONS FOR PAVEMENT AND LANDSCAPE AREAS.
5. ALL SIDEWALKS SHALL NOT EXCEED MORE THAN 2% CROSS SLOPE (IN THE DIRECTION OF SURFACE DRAINAGE) OR 5% RUNNING SLOPE EXCEPT AS NOTED. RUNNING SLOPES MAY EXCEED 5% ADJACENT TO EXISTING STREETS UP TO THE SLOPE OF THE STREET.
6. FFE OF EXISTING BUILDINGS ARE APPROXIMATE AND SHALL BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.

1" = 10'-0"
ORIGINAL IS ONE INCH SCALE

REGISTERED LANDSCAPE ARCHITECT
DAVID J. CAZARES
1871
STATE OF TEXAS
04 October 2024

mwm Design Group
TBPELS F-1416 10065600
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NO.	DATE	DESCRIPTION	BY

0 — 1"
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GRADING PLAN

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

301

9 OF 30

File: \\mwmdata\WWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\301 Grading Plan.dwg 22x34

SITE: 139928.27 SQ. FT. LIMITS OF CONSTRUCTION: 50546 SQ. FT.		
	AREA SQ. FT.	% IMP. COVER
EXISTING IMPERVIOUS COVER:	53064.02	37.92%
PROPOSED IMPERVIOUS COVER:	65591.55	46.87%

IMPERVIOUS COVER AREAS		
	COLOR	AREA SQ. FT.
EXISTING IMPERVIOUS COVER TO REMAIN: BUILDINGS		2166.36
EXISTING IMPERVIOUS COVER TO REMAIN: ASPHALT PAVEMENT		15720.02
EXISTING IMPERVIOUS COVER TO REMAIN: CONCRETE PAVEMENT		16041.48
MAINTENANCE OF EXISTING IMPERVIOUS COVER: CONCRETE PAVEMENT		13849.65
MAINTENANCE OF EXISTING IMPERVIOUS COVER: ASPHALT PAVEMENT		79.18
PROPOSED IMPERVIOUS COVER: CONCRETE PAVEMENT		2252.56
MAINTENANCE OF EXISTING IMPERVIOUS COVER: CONCRETE DETENTION POND		4176.85
PROPOSED IMPERVIOUS COVER: CONCRETE DETENTION POND		11305.45
TOTAL IMPERVIOUS COVER		65591.55

PERVIOUS COVER AREAS		
	COLOR	AREA SQ. FT.
EXISTING IMPERVIOUS TO BE REMOVED		1030.49
EXISTING PERVIOUS COVER		63438.65
EXISTING PERVIOUS COVER: SWIMMING POOL		5117.07
EXISTING PERVIOUS COVER: GRAVEL TRAIL/ PLANTER / BIORETENTION BASIN		3536.85
PROPOSED PERVIOUS COVER: BIORETENTION BASIN		1181.25
TOTAL PERVIOUS COVER		74304.31

1" = 40'-0"
ORIGINAL IS ONE INCH SQUARE
SCALE

STATE OF TEXAS
TOMAS M. RODRIGUEZ
119179
LICENSED
PROFESSIONAL ENGINEER
TBPE F# 1416
10/4/2024

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NO.	DATE	DESCRIPTION	BY

0 1"
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IMPERVIOUS COVER PLAN

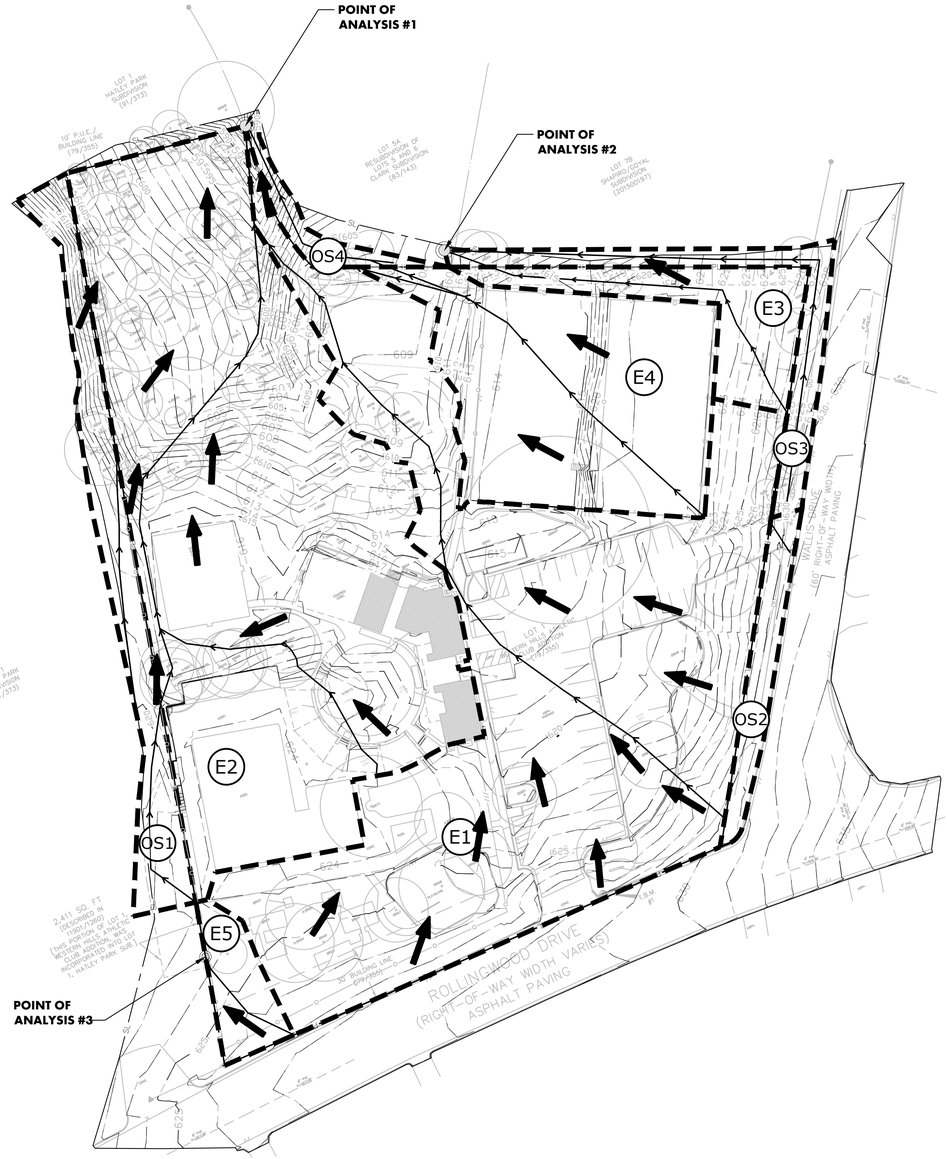
Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

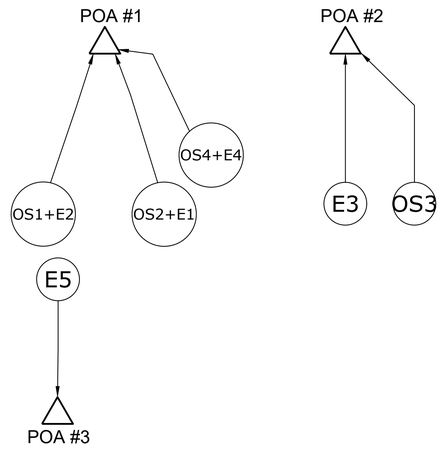
PLOTTED: 10/4/2024
JOB NO: 863-02

340

10 OF 30

File: \\mwmdata\MWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\340-IMP_Cover.dwg 22x34





1" = 40'-0"
ORIGINAL IS ONE INCH
SCALE

EXISTING CONDITION CATCHMENTS SUMMARY TABLE

	E-01	E-02	E-03	E-04	E-05	OS-01	OS-02	OS-03	OS-04	OS-04+E4	OS-02+E1	OS-01+E2
AREA (AC)	1.394	1.217	0.131	0.409	0.6	0.172	0.047	0.099	0.033	0.442	1.441	1.389
IMPERVIOUS COVER (%)	34.24	26.73	0	89.7	0	0	13.7	0	0	83.3	23.42	33.57
TC (MIN)	5.636	7.359	7.882	5	5	10.828	5	8.311	5.505	8.106	5.681	8.611
CN	86	85	80	96	80	80	82	80	80	95	86	84
2-YR PEAK FLOW (CFS)	5.46	4.52	0.40	2.10	0.19	0.49	0.16	0.30	0.11	2.07	5.64	4.79
10-YR PEAK FLOW (CFS)	10.29	8.71	0.84	3.53	0.41	1.02	0.33	0.63	0.22	3.52	10.63	9.41
25-YR PEAK FLOW (CFS)	13.99	11.85	1.18	4.61	0.57	1.43	0.46	0.88	0.31	4.6	14.4	12.91
100-YR PEAK FLOW (CFS)	20.94	17.77	1.81	6.65	0.89	2.20	0.71	1.36	0.47	6.66	21.56	19.49

TIME OF CONCENTRATION TABLE

DRAINAGE AREA	SHEET FLOW			SHALLOW CONCENTRATED FLOW			TOTAL TC (MIN)
	LENGTH	SLOPE	TC (MIN)	LENGTH	SLOPE	TC (MIN)	
E-01	100	10.00%	4.292	396.6	9.30%	1.343	5.636
E-02	100	6.30%	6.314	369.5	8.40%	1.045	7.359
E-03	100	7.50%	7.412	135	8.80%	0.470	7.882
E-04	100	7.70%	2.419	145.8	6.20%	0.605	5.00
E-05	78	3.00%	2.892	-	-	-	5.00
OS-01	100	3.00%	10.694	41.88	10.30%	0.135	10.828
OS-02	19.9	7.40%	1.254	-	-	-	5.00
OS-03	100	7.60%	7.373	209.16	5.30%	0.938	8.311
OS-04	100	16.30%	5.434	26.65	15.00%	0.071	5.505
OS-04+E-04	100	7.70%	7.334	250	11.20%	0.772	8.106
OS-02+E-01	100	10.00%	4.292	410	9.30%	1.389	5.681
OS-01+E-02	100	4.37%	7.309	374	8.80%	1.302	8.611

POINT OF ANALYSIS #1

	PRE-DEVELOPMENT	POST-DEVELOPMENT	% REDUCTION
2-YR PEAK FLOW (CFS)	12.5	11.31	9.52
10-YR PEAK FLOW (CFS)	23.56	20.3	13.84
25-YR PEAK FLOW (CFS)	31.87	27.09	15
100-YR PEAK FLOW (CFS)	47.5	39.90	16

POINT OF ANALYSIS #2

	PRE-DEVELOPMENT	POST-DEVELOPMENT
2-YR PEAK FLOW (CFS)	0.70	0.68
10-YR PEAK FLOW (CFS)	1.47	1.42
25-YR PEAK FLOW (CFS)	2.06	1.99
100-YR PEAK FLOW (CFS)	3.17	3.07

POINT OF ANALYSIS #3

	PRE-DEVELOPMENT	POST-DEVELOPMENT
2-YR PEAK FLOW (CFS)	0.19	0.19
10-YR PEAK FLOW (CFS)	0.41	0.41
25-YR PEAK FLOW (CFS)	0.57	0.57
100-YR PEAK FLOW (CFS)	0.89	0.89

STATE OF TEXAS
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NO.	DATE	DESCRIPTION	BY

0 1"
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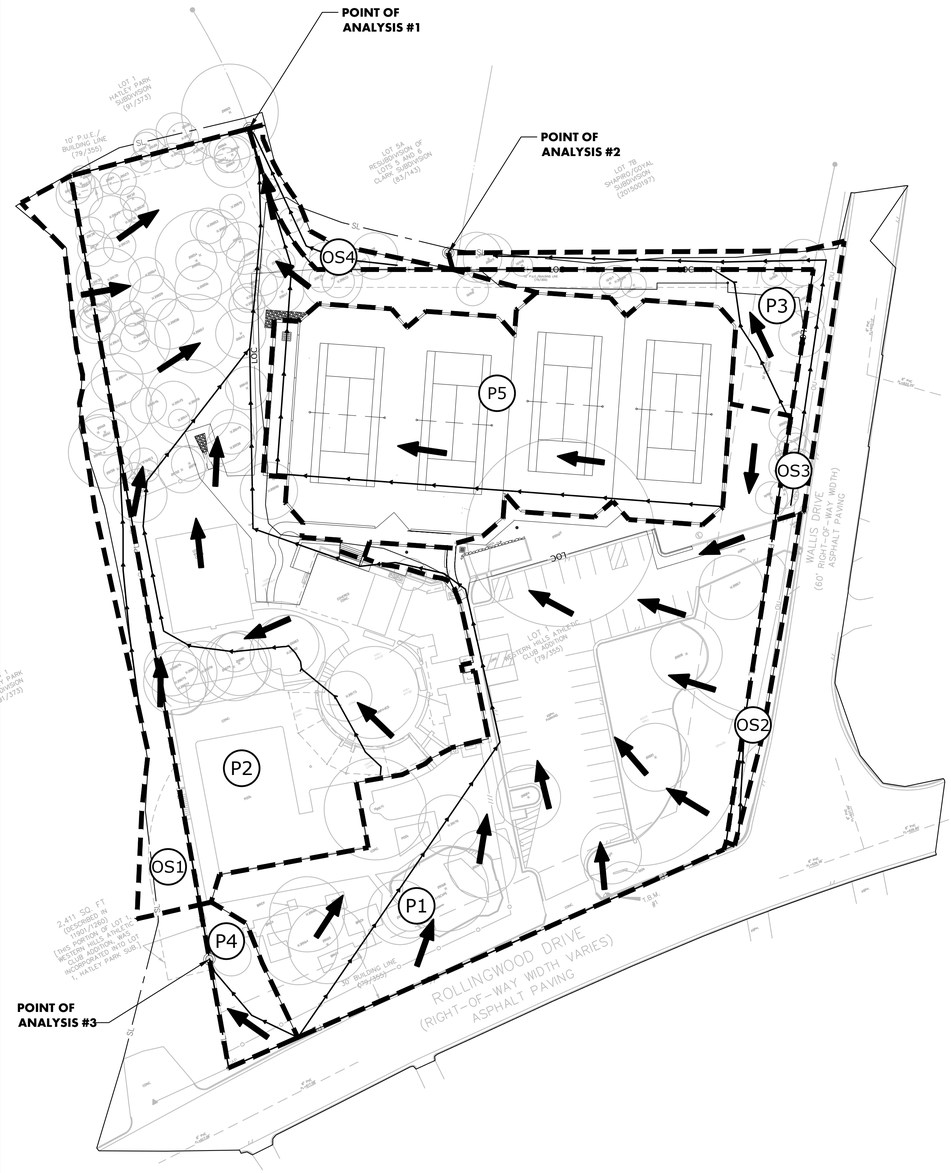
EXISTING DRAINAGE AREA MAP

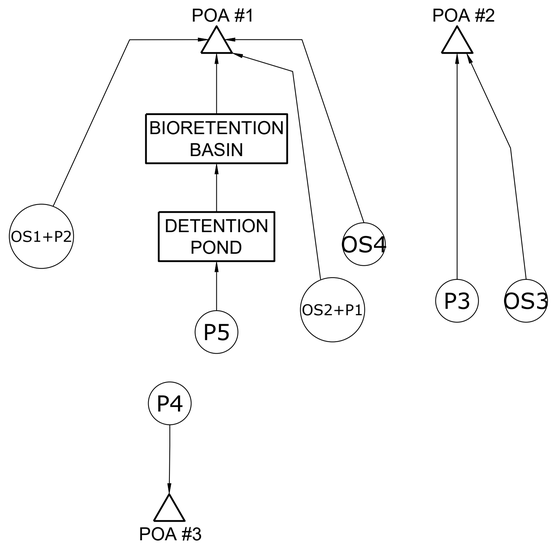
Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

501

11 OF 30





PROPOSED CONDITION CATCHMENTS SUMMARY TABLE

	P-01	P-02	P-03	P-04	P-05	OS-01	OS-02	OS-03	OS-04	OS-01+P2	OS-02+P1
AREA (AC)	1.135	1.199	0.122	0.600	0.720	0.172	0.047	0.099	0.033	1.371	1.182
IMPERVIOUS COVER (%)	42.00	27.70	0.00	0.00	97.00	0.00	13.70	0.00	0.00	24.22	40.87
TC (MIN)	6.059	7.321	7.283	5.000	3.700	10.828	5.000	8.311	5.505	8.285	8.332
CN	88.00	85.00	80.00	80.00	97.00	80.00	82.00	80.00	80.00	84	87
2-YR PEAK FLOW (CFS)	4.70	4.46	0.38	0.19	3.66	0.49	0.16	0.30	0.11	4.8	4.53
10-YR PEAK FLOW (CFS)	8.63	8.58	0.80	0.41	6.19	1.02	0.33	0.63	0.22	9.42	8.51
25-YR PEAK FLOW (CFS)	11.56	11.68	1.11	0.57	8.06	1.43	0.46	0.88	0.31	12.91	11.48
100-YR PEAK FLOW (CFS)	17.07	17.50	1.71	0.89	11.37	2.20	0.71	1.36	0.47	19.48	17.07

POINT OF ANALYSIS #1

	PRE-DEVELOPMENT	POST-DEVELOPMENT	% REDUCTION
2-YR PEAK FLOW (CFS)	12.5	11.31	9.52
10-YR PEAK FLOW (CFS)	23.56	20.3	13.84
25-YR PEAK FLOW (CFS)	31.87	27.09	15
100-YR PEAK FLOW (CFS)	47.5	39.90	16

POINT OF ANALYSIS #2

	PRE-DEVELOPMENT	POST-DEVELOPMENT
2-YR PEAK FLOW (CFS)	0.70	0.68
10-YR PEAK FLOW (CFS)	1.47	1.42
25-YR PEAK FLOW (CFS)	2.06	1.99
100-YR PEAK FLOW (CFS)	3.17	3.07

POINT OF ANALYSIS #3

	PRE-DEVELOPMENT	POST-DEVELOPMENT
2-YR PEAK FLOW (CFS)	0.19	0.19
10-YR PEAK FLOW (CFS)	0.41	0.41
25-YR PEAK FLOW (CFS)	0.57	0.57
100-YR PEAK FLOW (CFS)	0.89	0.89

TIME OF CONCENTRATION TABLE

DRAINAGE AREA	SHEET FLOW			SHALLOW CONCENTRATED FLOW			TOTAL TC
	LENGTH	SLOPE	TC	LENGTH	SLOPE	TC	
P-01	100	10.30%	4.483	538	7.60%	1.805	6.288
P-02	100	6.30%	6.031	366	8.60%	1.289	7.321
P-03	93.15	6.80%	7.283	-	-	-	7.283
P-04	78	3.00%	2.892	-	-	-	5.00
P-05	97	0.80%	1.969	350	12.00%	3.21	5.18
OS-01	100	3.00%	10.694	41.88	10.30%	0.135	10.828
OS-02	19.9	7.40%	1.254	-	-	-	5.00
OS-03	100	7.60%	7.373	209.16	5.30%	0.938	8.311
OS-04	100	16.30%	5.434	26.65	15.00%	0.071	5.505
OS-01+P-02	100	4.37%	6.982	370	8.60%	1.303	8.285
OS-01+P-01	100	10.30%	6.316	538	7.60%	2.016	8.332

DETENTION POND SUMMARY TABLE

STORM EVENT	PEAK FLOW (IN) (CFS)	PEAK FLOW (OUT) (CFS)	WATER SURFACE ELEVATION (FT)	MAX. POND STORAGE (CU-FT)
2-YR	3.66	2	613.6	1,031.00
10-YR	6.08	2.5	613.77	2,905.00
25-YR	7.91	2.92	613.91	4,448.00
100-YR	11.37	3.46	614.15	7,559.00

DETENTION COMPOSITE OUTLET STRUCTURE POND

OPENING TYPE	AMOUNT	DIAMETER (FT)	ELEV (FT)
AREA	4	0.5	613

RAIN GARDEN SUMMARY TABLE

STORM EVENT	PEAK FLOW (IN) (CFS)	PEAK FLOW (OUT) (CFS)	WATER SURFACE ELEVATION (FT)	MAX. POND STORAGE (CU-FT)
2-YR	2	1.99	613.05	1,055.00
10-YR	2.5	2.49	613.06	1,067.00
25-YR	2.92	2.89	613.07	1,077.00
100-YR	3.46	3.45	613.08	1,090.00

COMPOSITE OUTLET STRUCTURE RAIN GARDEN

OPENING TYPE	AMOUNT	DIMENSION (FT)	ELEV (FT)
RECTANGULAR GRATE	1	5 X 5	613

1" = 40'-0"
ORIGINAL IS ONE INCH
SCALE

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PROPOSED DRAINAGE AREA MAP

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4801 Rollingwood Drive
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JOB NO: 863-02

503

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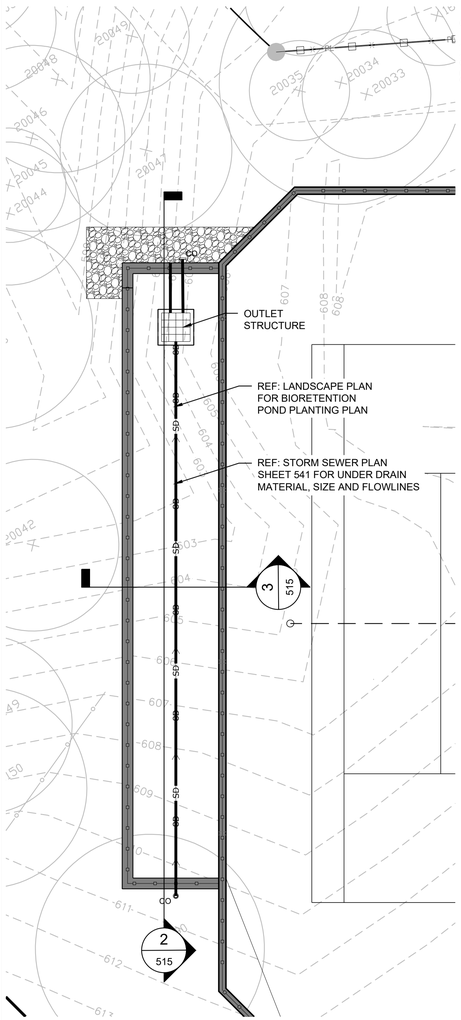
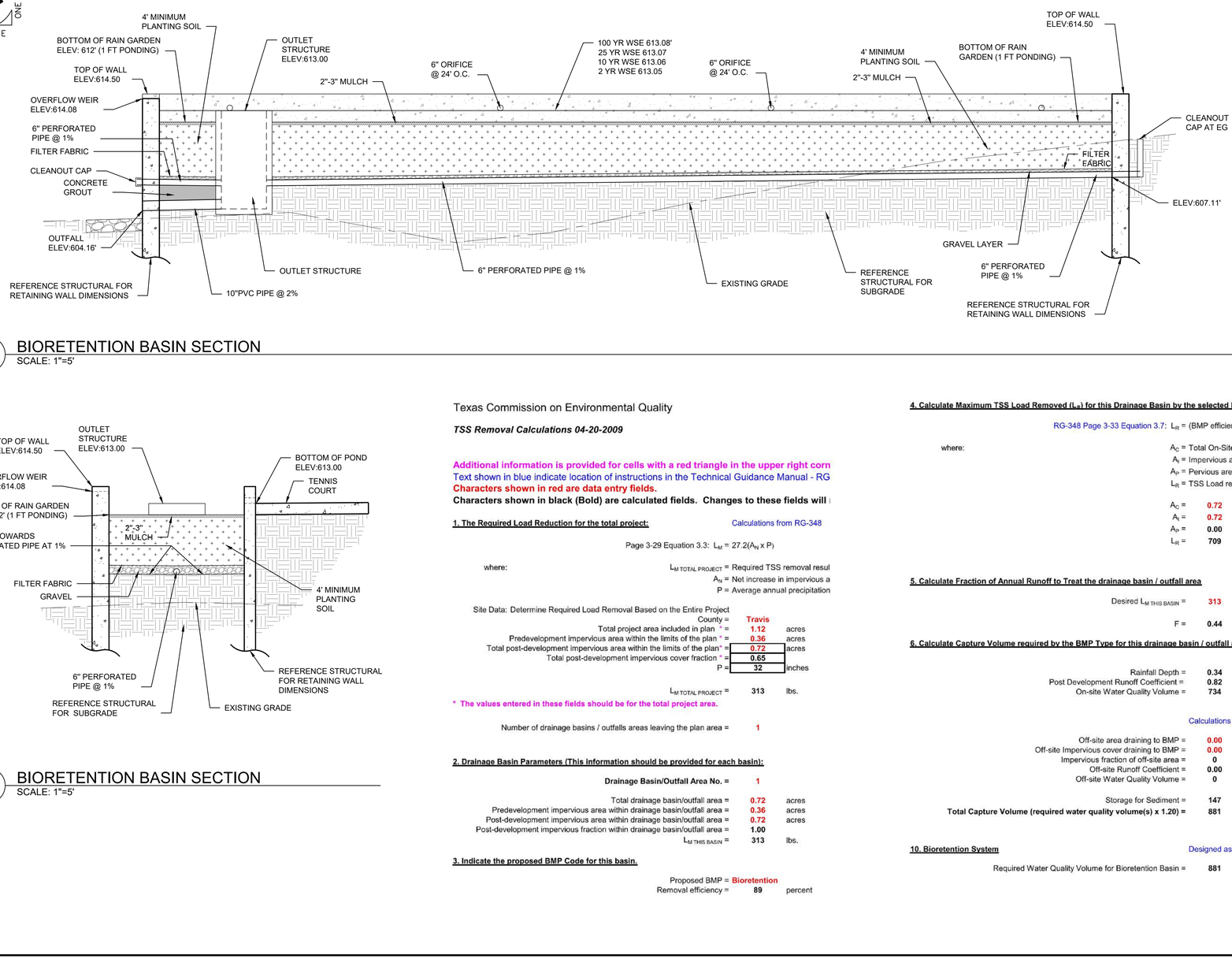
Files: \\mwmdata\MWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\503_PROP_DMAP.dwg 22x34



1 BIORETENTION BASIN PLAN
SCALE: 1"=10'



1 BIORETENTION BASIN SECTION
SCALE: 1"=5'

2 BIORETENTION BASIN SECTION
SCALE: 1"=5'

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Additional information is provided for cells with a red triangle in the upper right corn
Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG
Characters shown in red are data entry fields.
Characters shown in black (Bold) are calculated fields. Changes to these fields will

1. The Required Load Reduction for the total project: Calculations from RG-348

Page 3-29 Equation 3.3: $L_M = 27.2(A_N \times P)$

where:
$L_{M\ TOTAL\ PROJECT}$ = Required TSS removal resul
A_N = Net increase in impervious a
P = Average annual precipitation

Site Data: Determine Required Load Removal Based on the Entire Project

County =	Travis	
Total project area included in plan * =	1.12	acres
Predevelopment impervious area within the limits of the plan * =	0.36	acres
Total post-development impervious area within the limits of the plan* =	0.72	acres
Total post-development impervious cover fraction * =	0.65	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	313	lbs.

*** The values entered in these fields should be for the total project area.**

Number of drainage basins / outfalls areas leaving the plan area = 1

2. Drainage Basin Parameters (This information should be provided for each basin):

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	0.72	acres
Predevelopment impervious area within drainage basin/outfall area =	0.36	acres
Post-development impervious area within drainage basin/outfall area =	0.72	acres
Post-development impervious fraction within drainage basin/outfall area =	1.00	
$L_{M\ THIS\ BASIN}$ =	313	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Bioretention
Removal efficiency = 89 percent

4. Calculate Maximum TSS Load Removed (L_R) for this Drainage Basin by the selected BMP Type.

RG-348 Page 3-33 Equation 3.7: L_R = (BMP efficiency) x P x (A_N x 2

where:
A_C = Total On-Site drainage area
A_I = Impervious area proposed in
A_P = Pervious area remaining in t
L_R = TSS Load removed from this

A_C =	0.72	acres
A_I =	0.72	acres
A_P =	0.00	acres
L_R =	709	lbs

5. Calculate Fraction of Annual Runoff to Treat the drainage basin / outfall area

Desired $L_{M\ THIS\ BASIN}$ = 313 lbs.

F = 0.44

6. Calculate Capture Volume required by the BMP Type for this drainage basin / outfall area.

Rainfall Depth =	0.34	inches
Post Development Runoff Coefficient =	0.82	
On-site Water Quality Volume =	734	cubic feet

Calculations from RG-348

Off-site area draining to BMP =	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0	
Off-site Runoff Coefficient =	0.00	
Off-site Water Quality Volume =	0	cubic feet
Storage for Sediment =	147	
Total Capture Volume (required water quality volume(s) x 1.20) =	881	cubic feet

10. Bioretention System Designed as Required in RG

Required Water Quality Volume for Bioretention Basin = 881 cubic feet

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WATER QUALITY PLAN, SECTIONS, AND CALCULATIONS

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JOB NO: 863-02

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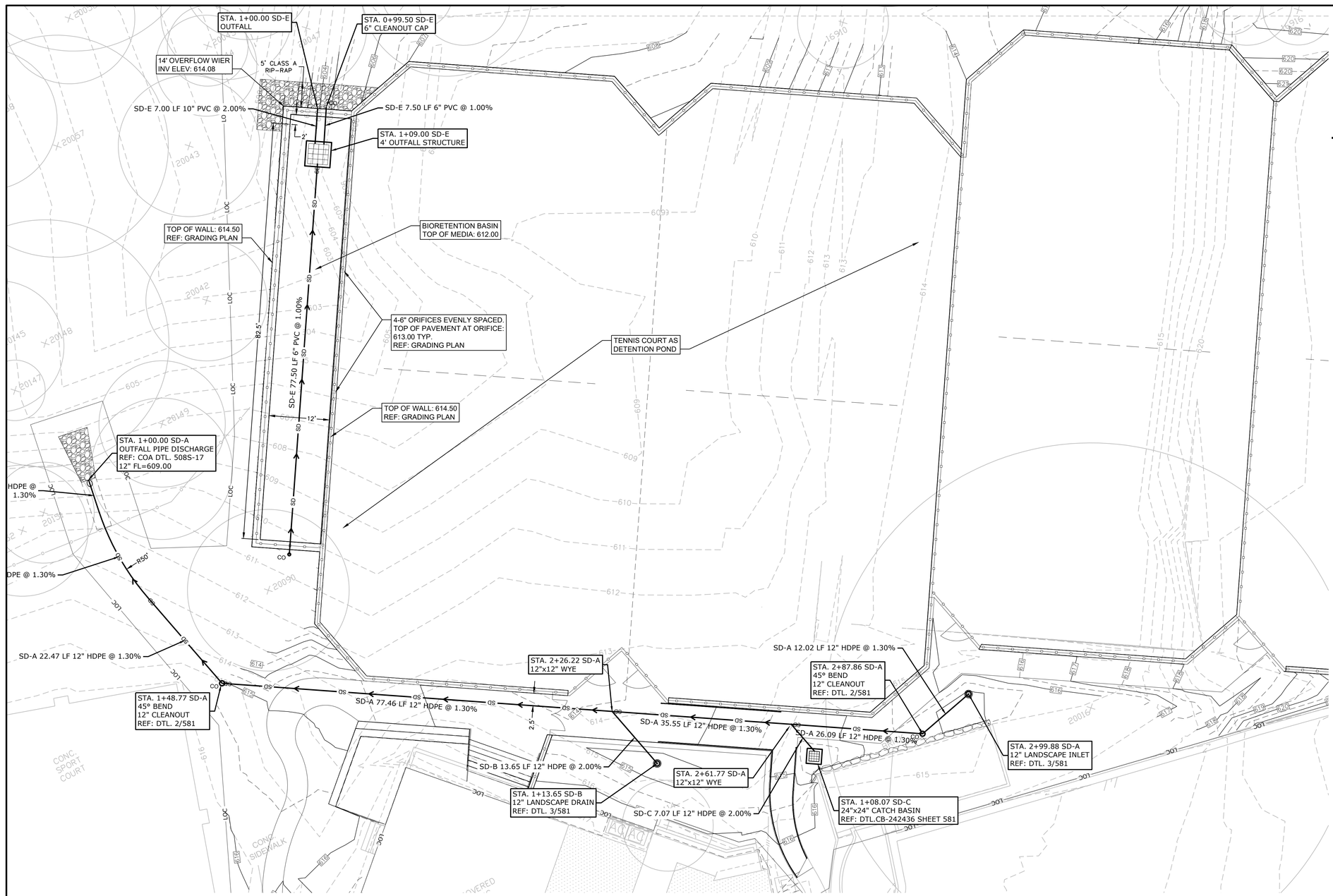

NOTES:
1. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS AND/OR CROSSINGS TWO WEEKS PRIOR TO CONSTRUCTION.
2. PIPING OF VARYING DIAMETERS SHALL BE INSTALLED TO MATCH CROWN, UNLESS OTHERWISE NOTED.
3. ALL STORM PIPE SHALL BE HDPE EXCEPT AS NOTED.

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STORM SEWER PLAN

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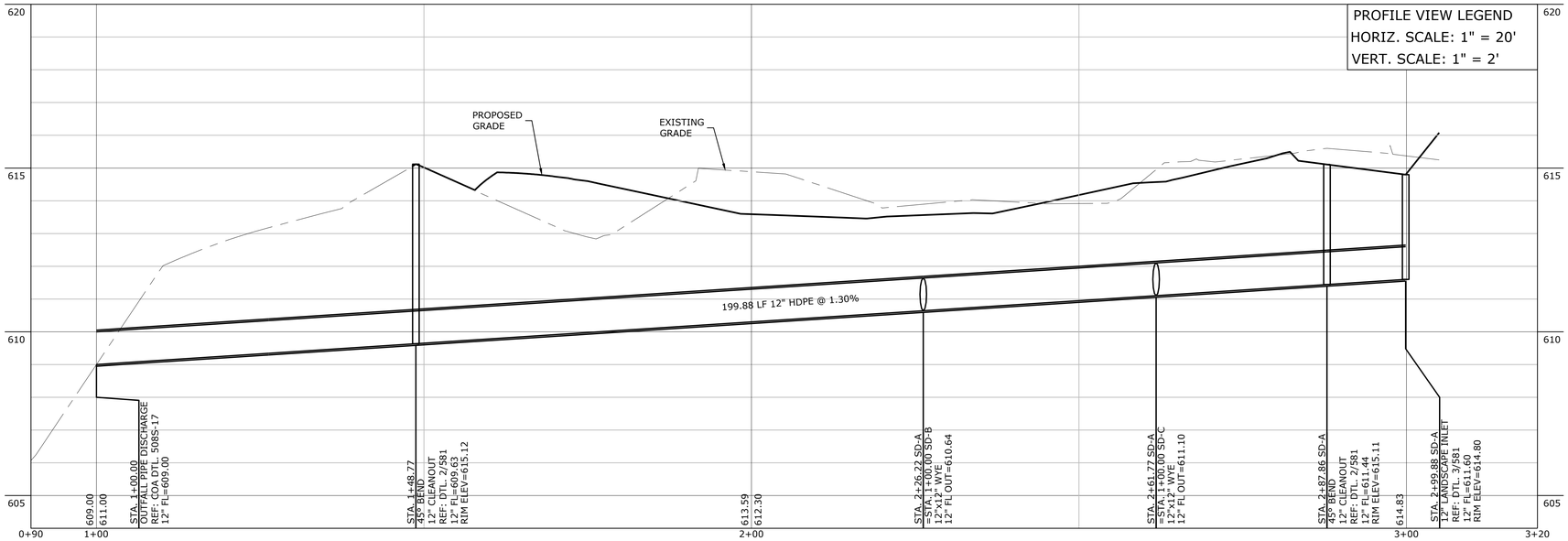
SD-A PROFILE



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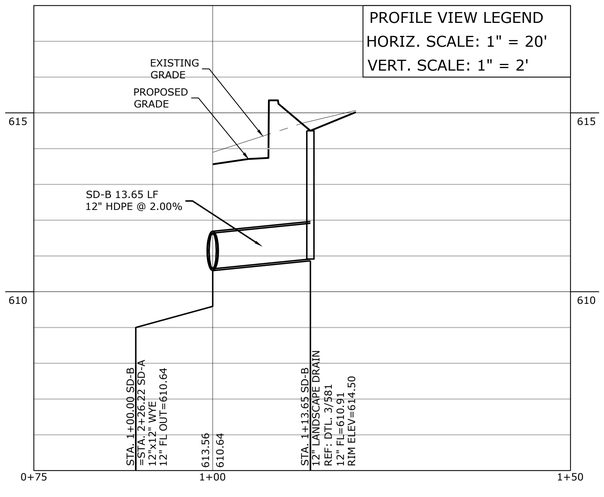
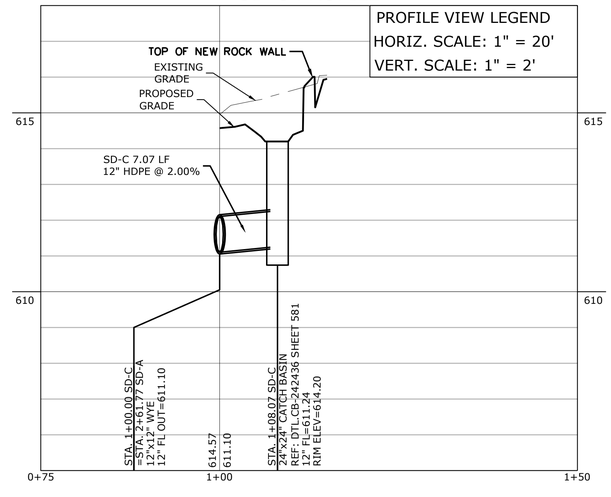


SD-C PROFILE



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STORM SEWER PROFILES

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JOB NO: 863-02

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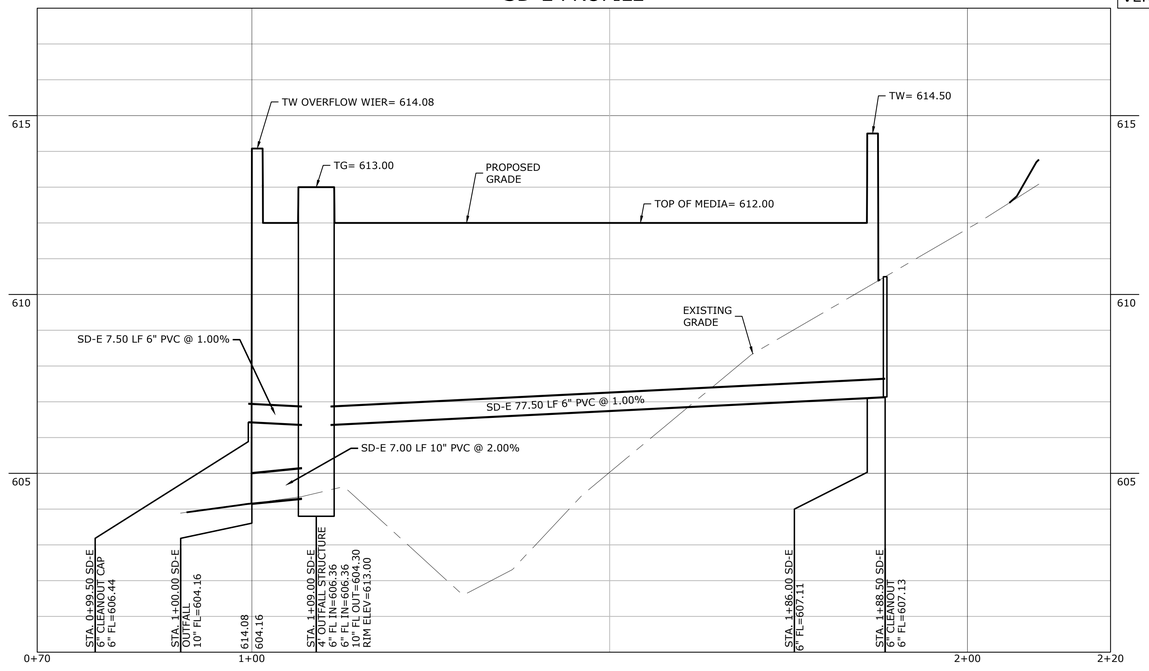
PROFILE VIEW LEGEND
HORIZ. SCALE: 1" = 20'
VERT. SCALE: 1" = 2'

SD-E PROFILE



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STORM SEWER PROFILES

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16 OF 30

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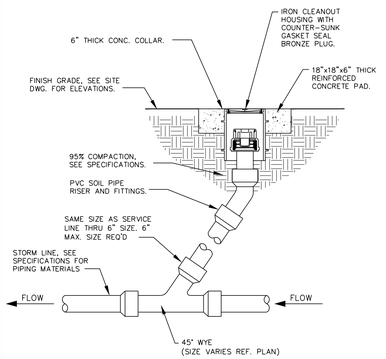
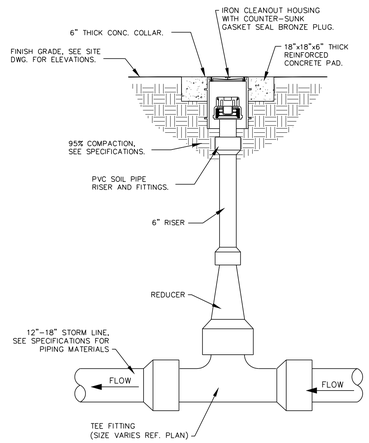
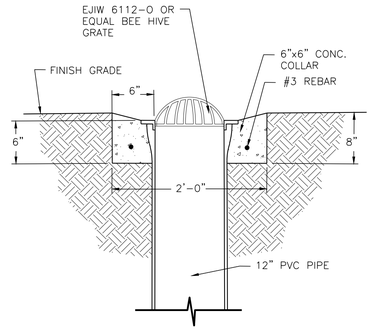


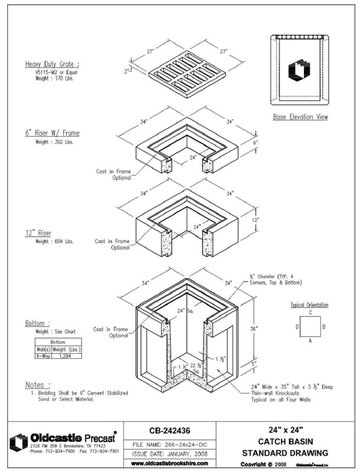
1	SD CLEANOUT DETAIL
581	n.t.s.



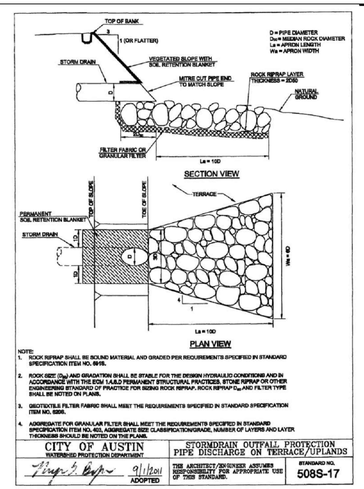
2	12"-18" SD CLEANOUT DETAIL
581	n.t.s.



3	12" LANDSCAPE INLET
581	n.t.s.

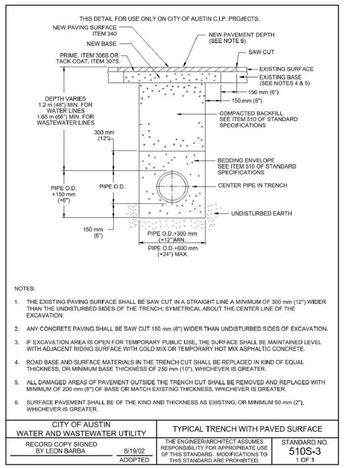


Oldcastle Precast	CB-242436	24" x 24" CATCH BASIN STANDARD DRAWING
1128 FM 359 S Brookshire, TX 77423 Phone: 713-924-7900 Fax: 713-924-7901	FILE NAME: 266-24x24-DC	
	ISSUE DATE: JANUARY, 2008	
	www.oldcastleprecastshs.com	Copyright © 2008



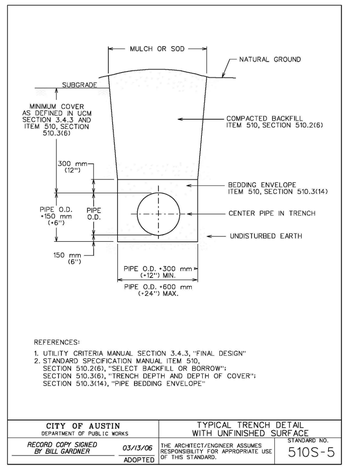
NOTE:
1. ROCK RIPRAP SHALL BE SOUND MATERIAL AND GRADED PER REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION ITEM NO. 609S.
2. ROCK SIZE (D_{50}) AND GRADATION SHALL BE STABLE FOR THE DESIGN HYDRAULIC CONDITIONS AND IN ACCORDANCE WITH THE ECM 1.4.6.3 PERMANENT STRUCTURAL PRACTICES. STONE RIPRAP OR OTHER ENGINEERING STANDARD OF PRACTICE FOR SIZING ROCK RIPRAP. ROCK RIPRAP D_{50} AND FILTER TYPE SHALL BE NOTED ON PLANS.
3. GEOTEXTILE FILTER FABRIC SHALL MEET THE REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION ITEM NO. 609S.
4. AGGREGATE FOR GRANULAR FILTER SHALL MEET THE REQUIREMENTS SPECIFIED IN STANDARD SPECIFICATION ITEM NO. 603, AGGREGATE SIZE CLASSIFICATION/GRADE, NUMBER OF LAYERS AND LAYER THICKNESS SHOULD BE NOTED ON THE PLANS.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	STORMDRAIN OUTFALL PROTECTION PIPE DISCHARGE ON TERRACE/UPLANDS
Gregory Guernsey 9/17/2011 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 508S-17



NOTES:
1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE A MINIMUM OF 300 mm (12") WIDER THAN THE UNDISTURBED SIDES OF THE TRENCH, SYMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. ANY CONCRETE PAVING SHALL BE SAW CUT 150 mm (6") WIDER THAN UNDISTURBED SIDES OF EXCAVATION.
3. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX OR TEMPORARY HOT MIX ASPHALTIC CONCRETE.
4. ROAD BASE AND SURFACE MATERIALS IN THE TRENCH CUT SHALL BE REPLACED IN KIND OF EQUAL THICKNESS, OR MINIMUM BASE THICKNESS OF 250 mm (10"), WHICHEVER IS GREATER.
5. ALL DAMAGED AREAS OF PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH MINIMUM OF 200 mm (8") OF BASE OR MATCH EXISTING THICKNESS, WHICHEVER IS GREATER.
6. SURFACE PAVEMENT SHALL BE OF THE KIND AND THICKNESS AS EXISTING, OR MINIMUM 50 mm (2"), WHICHEVER IS GREATER.

CITY OF AUSTIN WATER AND WASTEWATER UTILITY	TYPICAL TRENCH WITH PAVED SURFACE
RECORD COPY SIGNED BY LEON BARBA 8/19/02 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED. STANDARD NO. 510S-3 1 OF 1



REFERENCES:
1. UTILITY CRITERIA MANUAL SECTION 3.4.3, "FINAL DESIGN"
2. STANDARD SPECIFICATION MANUAL ITEM 510, SECTION 510.2(6), "SELECT BACKFILL OR BORROW"; SECTION 510.3(6), "TRENCH DEPTH AND DEPTH OF COVER"; SECTION 510.3(14), "PIPE BEDDING ENVELOPE"

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPICAL TRENCH DETAIL WITH UNFINISHED SURFACE
RECORD COPY SIGNED BY BILL GARDNER 03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 510S-5

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DRAINAGE DETAILS

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4801 Rollingwood Drive
Rollingwood, TX 78746

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JOB NO: 863-02

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LANDSCAPE NOTES

1. THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL OVERHEAD AND UNDERGROUND UTILITIES (INCLUDING THOSE PROPOSED WITH THIS PROJECT, I.E. IRRIGATION, WASTEWATER, WATER, STORM SEWER, GAS, TELECOM, FIBER OPTIC, ELECTRIC, ETC.) PRIOR TO STARTING WORK.

2. INFORMATION PROVIDED ON THIS PLAN IS GENERAL IN NATURE; DIMENSIONS, AREAS, AND DISTANCES ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED PRIOR TO BIDDING. DISCREPANCIES SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT FOR RESOLUTION PRIOR TO STARTING WORK.

3. THE CONTRACTOR IS TO THOROUGHLY FAMILIARIZE HIM/HERSELF WITH ALL PLANS, SPECIFICATIONS AND THE SITE PRIOR TO BIDDING. FAILURE TO DO SO WILL NOT REDUCE THE CONTRACTOR'S OBLIGATION TO PERFORM THE WORK AS DESCRIBED FOR THE PRICE BID.

4. QUANTITIES SHOWN ARE INTENDED TO ASSIST CONTRACTORS IN EVALUATING THEIR OWN TAKE OFFS AND ARE NOT GUARANTEED AS ACCURATE REPRESENTATIONS OF REQUIRED MATERIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS BID QUANTITIES AND IS REQUIRED TO REFLECT THE DESIGN INTENT.

5. ALL PLANT MATERIALS SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, OR EQUIVALENT

6. NO SUBSTITUTIONS OF PLANT MATERIAL LOCATIONS, SPECIES OR SIZE WILL BE ALLOWED WITHOUT PRIOR APPROVAL OF THE LANDSCAPE ARCHITECT. ALL PLANT MATERIALS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

7. AS PART OF THE BASE BID, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL LANDSCAPE MAINTENANCE AS INDICATED IN THE PROJECT SPECIFICATIONS (INCLUDING, BUT NOT LIMITED TO MOWING, WATERING, REPLACEMENT OF UNACCEPTABLE, DISEASED OR DEAD PLANTS, ETC.) AND WEED CONTROL UNTIL FINAL ACCEPTANCE BY OWNER.

8. CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL TO BE ALIVE AND BE IN A HEALTHY, VIGOROUS CONDITION FOR A PERIOD OF ONE YEAR FROM THE DATE OF COMPLETION OF THE ENTIRE PROJECT OR OTHER DATE(S) ESTABLISHED BY THE LANDSCAPE ARCHITECT, OR OWNER, EXCEPT AS MAY RESULT FROM NEGLECT OR DAMAGE BY THE OWNER, DAMAGE BY OTHERS OR UNUSUAL PHENOMENA BEYOND THE CONTRACTORS CONTROL.

9. CONTRACTOR SHALL REPLACE ALL DEAD, AND/OR UNHEALTHY PLANT MATERIALS AND/OR PLANT MATERIALS THAT HAVE PARTIALLY DIED PURSUANT TO THE CONDITION OF THE WARRANTY AT NO EXPENSE TO THE OWNER. DEAD MATERIALS MUST BE REPLACED WITHIN 10 BUSINESS DAYS PER TECHNICAL PROVISIONS. RE-WARRANT REPLACEMENT PLANTS FOR AN ADDITIONAL ONE YEAR UNDER THE SAME TERMS AS THE ORIGINAL WARRANTY. PLANT MATERIALS USED FOR REPLACEMENT SHALL BE THE SAME SPECIES, SIZE AND SHAPE.

10. ALL PLANTS SHALL BE HEALTHY, VIGOROUS AND REPRESENTATIVE OF THE SPECIES SPECIFIED. ALL PLANTS SHALL BE WELL BRANCHED, PROPORTIONED, AND FREE OF ALL INSECTS, DISEASES, BARK BRUISES, SCRAPES, CRACKED BRANCHES AND PHYSICAL DAMAGE. PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. NO PLANT MATERIALS WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIAL SHALL BE REMOVED AT TIME OF PLANTING, AS SHOWN ON DETAILS.

11. ALL PLANTS SHALL BE INSTALLED AS PER DETAILS AND THE CONTRACT SPECIFICATIONS.

12. ALL PLANTS AND STAKES SHALL BE SET PLUMB UNLESS OTHERWISE SPECIFIED.

13. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE CONTRACT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

14. INSTALLATION OF LANDSCAPE SHALL BE PERFORMED BY A QUALIFIED LANDSCAPE INSTALLER WITH A MINIMUM OF FIVE YEARS CONTINUOUS EXPERIENCE OF INSTALLING LANDSCAPE PLANTINGS OF SIMILAR SIZE AND SCOPE.

15. CONTRACTOR SHALL PROVIDE MAINTENANCE FOR LANDSCAPE & IRRIGATION SYSTEM FOR 12 MONTHS FOLLOWING FINAL ACCEPTANCE OF ENTIRE PROJECT.

16. LANDSCAPE MATERIALS SHALL BE LOCATED SO AS NOT TO OBSTRUCT VISUAL OR PHYSICAL ACCESS TO FIRE HYDRANTS. ALL LANDSCAPE MATERIALS SHALL BE INSTALLED IN CONFORMANCE WITH UTILITY COMPANY REQUIREMENTS AT TRANSFORMERS, METERS, OVERHEAD LINES, ETC. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.

17. EXECUTE ALL LANDSCAPING AND REVEGETATION PRIOR TO REQUEST FOR CERTIFICATE OF OCCUPANCY, FINAL INSPECTION OR AS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER. HOWEVER, NO PLANT MATERIALS SHALL BE INSTALLED BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE LANDSCAPE ARCHITECT, OWNER OR OWNER'S DESIGNATED REPRESENTATIVE. FULLY PREPARE ALL LANDSCAPE BEDS (INCLUDING IRRIGATION) PRIOR TO INSTALLATION OF LANDSCAPE PLANTS.

18. SITE STOCKPILED TOPSOIL MAY BE USED IF IT HAS BEEN DEEMED ACCEPTABLE IN QUALITY AND APPROVED BY LANDSCAPE ARCHITECT.

19. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING.

20. THE LANDSCAPE CONTRACTOR SHALL PROVIDE AN IRRIGATION SYSTEM FULLY COMPLIANT WITH TCEQ REQUIREMENTS AND COMPLIANT WITH THE LANDSCAPE IRRIGATION NOTES AND CONTRACT SPECIFICATIONS.

LANDSCAPE IRRIGATION NOTES

AUTOMATIC IRRIGATION SYSTEMS SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS. THESE REQUIREMENTS SHALL BE NOTED ON THE SITE DEVELOPMENT PERMIT AND SHALL BE IMPLEMENTED AS PART OF THE LANDSCAPE INSPECTION:

1. A NEW COMMERCIAL AND MULTI-FAMILY IRRIGATION SYSTEM MUST BE DESIGNED AND INSTALLED SO THAT:

(A) THERE IS NOT DIRECT OVERSPRAY ONTO NON-IRRIGATED AREAS;

(B) THE SYSTEM DOES NOT INCLUDE SPRAY IRRIGATION ON AREAS LESS THAN SIX (6) FEET WIDE (SUCH AS MEDIANS, BUFFER STRIPS, AND PARKING LOT ISLANDS)

(C) ABOVE-GROUND IRRIGATION EMISSION DEVICES ARE SET BACK AT LEAST SIX (6) INCHES FROM IMPERVIOUS SURFACES;

(D) THE IRRIGATION SYSTEM HAS A MASTER VALVE;

(E) CIRCUIT REMOTE CONTROL VALVES HAVE ADJUSTABLE FLOW CONTROLS;

(F) SERVICEABLE IN-HEAD CHECK VALVES ARE ADJACENT TO PAVED AREAS WHERE ELEVATION DIFFERENCES MAY CAUSE LOW HEAD DRAINAGE;

(G) THE IRRIGATION SYSTEM HAS A CITY- APPROVED WEATHER BASED CONTROLLER;

(H) AN AUTOMATIC RAIN SHUT-OFF DEVICE SHUTS OFF THE IRRIGATION SYSTEM AUTOMATICALLY AFTER NOT MORE THAN A ONE-HALF INCH (1/2") RAINFALL;

(I) ZONE VALVES AND CIRCUITS ARE SEPARATED BASED ON PLANT WATER REQUIREMENTS;

(J) AN IRRIGATION EMISSION DEVICE (SUCH AS SPRAY, ROTOR, OR DRIP EMITTER) DOES NOT EXCEED THE MANUFACTURER'S RECOMMENDED OPERATING PRESSURE; AND

(K) NO COMPONENT OF THE IRRIGATION SYSTEM DEVIATES FROM THE MANUFACTURER'S RECOMMENDED USE OF THE PRODUCT.

2. THE MAXIMUM SPACING BETWEEN SPRAY OR ROTARY SPRINKLER HEADS MUST NOT EXCEED THE RADIUS OF THROW OF THE HEAD UNLESS MANUFACTURER OF THE SPRINKLER HEAD SPECIFICALLY RECOMMENDS A GREATER SPACING. THE RADIUS OF THROW IS DETERMINED BY REFERENCE TO THE MANUFACTURER'S SPECIFICATIONS FOR A SPECIFIC NOZZLE AT A SPECIFIC OPERATING PRESSURE.

3. THE IRRIGATION INSTALLER SHALL DEVELOP AND PROVIDE AN AS-BUILT DESIGN PLAN AND WATER BUDGET TO THE CITY AT THE TIME THE FINAL PLUMBING INSPECTION IS PERFORMED. THE WATER BUDGET SHALL INCLUDE:

(A) A CHART CONTAINING ZONE NUMBERS, PRECIPITATION RATE, AND GALLONS PER MINUTE; AND

(B) THE LOCATION OF THE EMERGENCY IRRIGATION SYSTEM SHUT-OFF VALVE. A LAMINATED COPY OF THE WATER BUDGET SHALL BE PERMANENTLY INSTALLED INSIDE THE IRRIGATION CONTROLLER DOOR.

4. IRRIGATION CONTRACTOR SHALL PROVIDE A COMPLETE AS-BUILT PLAN TO OWNER, OR OWNER'S DESIGNATED REPRESENTATIVE SHOWING ALL IRRIGATION COMPONENTS AND SIZE OF COMPONENTS, INCLUDING WATER PRESSURE, MAIN LINE, LATERAL LINES, VALVES, HEADS, BACKFLOW DEVICE, CONTROLLER, QUICK COUPLERS, ETC.

5. COMPLY WITH ALL APPLICABLE TCEQ IRRIGATION RULES AND REGULATIONS.

6. CONTRACTOR IS TO VERIFY PRESSURE AND WATER SUPPLY CHARACTERISTICS ARE ADEQUATE FOR THIS INSTALLATION. ANY DISCREPANCIES OR INADEQUACIES SHALL BE REPORTED TO THE OWNER IMMEDIATELY, BEFORE STARTING CONSTRUCTION. DESIGN PRESSURE IS 65 PSI AT 45 GMP.

7. CONTRACTOR SHALL OBTAIN ALL PERMITS AND HANDLE ALL INSPECTIONS FOR THIS WORK AS REQUIRED BY LOCAL REGULATIONS AND SHALL PAY ALL FEES ASSOCIATED WITH THESE PERMIT(S).

8. VERIFY LOCATION OF CONTROLLER, WATER SUPPLY; SITE CONDITIONS MAY VARY. OPERABLE IRRIGATION EQUIPMENT (VALVES, QUICK COUPLERS, BFP, ETC.) SHALL BE INSTALLED SEPARATELY IN VALVE BOXES.

9. ALL HEADS SHALL BE INSTALLED ON TRIPLE SWING JOINTS. HEADS SHALL BE NOT BE LOCATED CLOSER THAN 6" FROM PAVEMENT.

10. ADJUST RADII AND SPRAY PATTERNS TO ELIMINATE OVERSPRAY ONTO BUILDINGS, SIDEWALKS, FENCES, DRIVEWAYS, ROADWAYS, ETC.

11. ALL PAVEMENT CROSSINGS (LATERALS, WIRING, MAINLINE, ETC.) SHALL OCCUR WITHIN SLEEVES. INCLUDING SIDEWALKS, DRIVEWAYS, TRAILS, BIKE WAYS, ROADWAYS, ETC.

12. PRIOR TO CONSTRUCTION, VERIFY WITH THE GENERAL CONTRACTOR AND ALL UTILITY COMPANIES THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES. IMMEDIATELY REPORT ANY BREAKAGES TO THE APPROPRIATE UTILITY COMPANY.

13. THE CONTRACTOR IS TO INSTALL ALL SLEEVES IN SEQUENCE WITH OTHER CONSTRUCTION ACTIVITIES, AND WILL BE RESPONSIBLE FOR COORDINATING WITH OTHER SITE CONTRACTORS FOR THIS WORK. ADEQUATELY MARK THE LOCATIONS OF ALL SLEEVES AND PIPE CONNECTION POINTS TO EXISTING LINES.

14. INSTALL THE MAIN LINE A MINIMUM OF 15" DEEP AND LATERAL LINES MIN. 12" DEEP.

15. PROVIDE A NEW WATER PROOF TAG WITH CONTRACTOR'S NAME AND TELEPHONE NUMBER CLEARLY SHOWN AND SECURELY ATTACHED TO THE INSIDE OF THE CONTROLLER DOOR.

TREE MITIGATION/REPLACEMENT LIST

TREE TAG	TREE TYPE	SIZE (INCHES)				TOTAL CALIPER (INCHES)	REPLACEMENT FACTOR	REPLACEMENT INCHES REQUIRED	REASON FOR REMOVAL/MITIGATION	REPLACEMENT TREE TYPE	PROPOSED TREE CALIPER (INCHES)
16910	Chinaberry	9.00				9.0	0%	-	Invasive		
16912	Ligustrum	8.00	6.0			11.0	0%	-	Invasive		
20033	Chinaberry	9.00				9.0	0%	-	Invasive		
20038	Chinaberry	15.00				15.0	0%	-	Invasive		
20047	Live Oak	12.00				12.0	25%	3.00	Construction	MEXICAN SYCAMORE	4.00
20088	Live Oak	14.00				14.0	25%	3.50	Construction	MEXICAN SYCAMORE	4.00
20089	Live Oak	11.00				11.0	0%	-	Construction		
20093	Live Oak	18.00				18.0	25%	4.50	Construction	CEDAR ELM	6.00
20094	Live Oak	12.00				12.0	25%	3.00	Construction	MEXICAN SYCAMORE	4.00
20095	Live Oak	10.00				10.0	0%	-	Construction		
20096	Live Oak	11.00				11.0	0%	-	Construction		
20097	Live Oak	9.00				9.0	0%	-	Construction		
20098	Live Oak	12.00				12.0	25%	3.00	Construction	MEXICAN SYCAMORE	4.00
20099	Live Oak	15.00				15.0	25%	3.75	Construction	TEXAS ASH	4.00
20100	Live Oak	12.00				12.0	25%	3.00	Construction	TEXAS ASH	4.00
20101	Live Oak	13.00				13.0	25%	3.25	Construction	TEXAS ASH	4.00
20102	Live Oak*	19.00	17.0			27.5	25%	6.00	Construction	CEDAR ELM	6.00
20103	Live Oak	20.00				20.0	25%	5.00	Construction	CEDAR ELM	6.00
20105	Cedar Elm	15.00				15.0	25%	3.75	Construction	CEDAR ELM	4.00
20106	Live Oak	10.00				10.0	0%	-	Construction		
20107	Live Oak	12.00				12.0	25%	3.00	Construction	CEDAR ELM	4.00
20108	Live Oak	7.00				7.0	0%	-	Construction		-
20109	Live Oak	12.00				12.0	25%	3.00	Construction	TEXAS ASH	4.00
					TOTAL INCHES REMOVED	296.50	TOTAL REPLACEMENT INCHES REQUIRED	33.75	TOTAL REPLACEMENT INCHES PROVIDED		40.00

* Only replacing 6" maximum, as allowed by code

NOTE:
TOTAL CALIPER OF REPLACEMENT INCHES MUST EQUAL REQUIRED INCHES AS MEASURED AT DBH.

PLANT LIST

COMMON NAME	BOTANICAL NAME	SIZE	COMMENT
CEDAR ELM	ULMUS CRASSIFOLIA	6" CALIPER	12' HT., SINGLE TRUNK, B&B OR CONTAINER/BOX
CEDAR ELM	ULMUS CRASSIFOLIA	4" CALIPER	12' HT., SINGLE TRUNK, B&B OR CONTAINER/BOX
MEXICAN SYCAMORE	PLATANUS MEXICANA	4" CALIPER	12' HT., SINGLE TRUNK, B&B OR CONTAINER/BOX
TEXAS ASH	FRAXINUS TEXENSIS	4" CALIPER	12' HT., SINGLE TRUNK, B&B OR CONTAINER/BOX
LITTLE BLUESTEM	SCHIZACHYRIUM SCOPRAIUM	1 GAL	24" O.C. TYP.
OBEDIENT PLANT	PHYSOSTEGIA VIRGINIANA	1 GAL	36" O.C. TYP.
SWITCH GRASS	PANICUM VIRGATUM	1 GAL	48" O.C. TYP.
BERMUDA SOD	CYNODON DACTYLON	SOD	AS SHOWN

City Tree Requirements
Total Lot Area = 139,929
1 tree per 2000' s.f.
Required trees = 70 trees
Existing Tree Credit
11' height or more (1 for 1) = 95 trees
Trees Provided
Proposed trees = 13 trees
Total trees provided = 108 trees

REGISTERED LANDSCAPE ARCHITECT
DAVID J. CAZARES
1871
STATE OF TEXAS
04 October 2024

mwm DesignGroup
TBPELS F-1416 10065600
TBAE 1452
HUB
9001 N IH35
Suite 102
Austin, Texas 78753
p: 512.453.0767
f: 512.453.1734

NO.	DATE	DESCRIPTION	BY

0 1"
The bar above measures one inch on the original drawing. Adjust scales accordingly.

LANDSCAPE NOTES & CALCULATIONS

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

700

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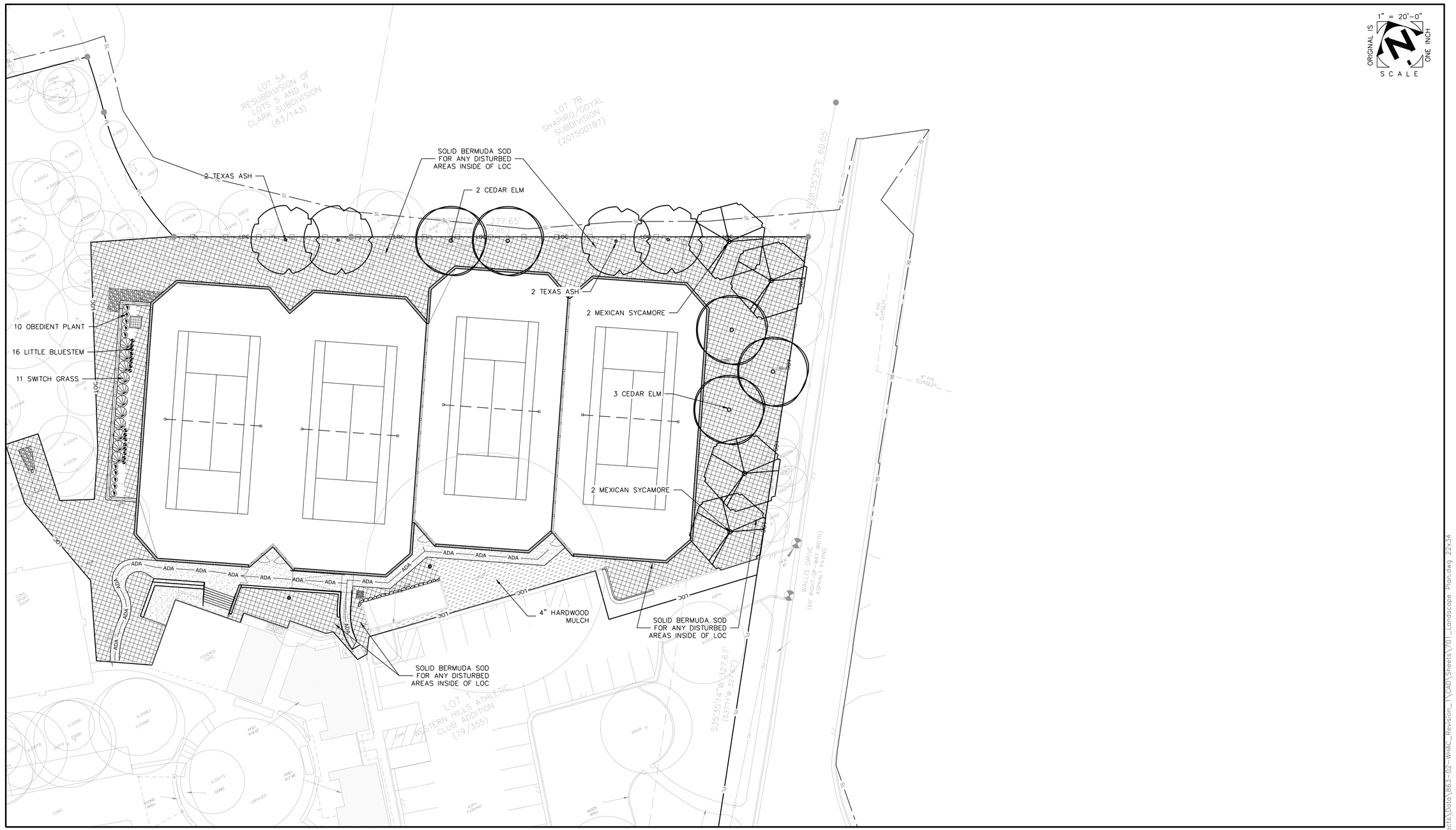

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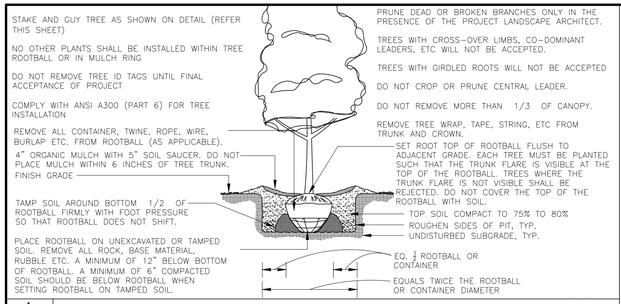
LANDSCAPE PLAN

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

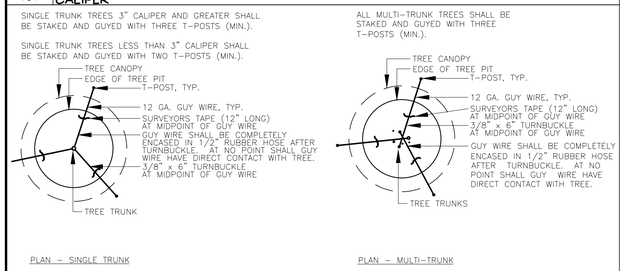
PLOTTED: 10/4/2024
JOB NO: 863-02

701

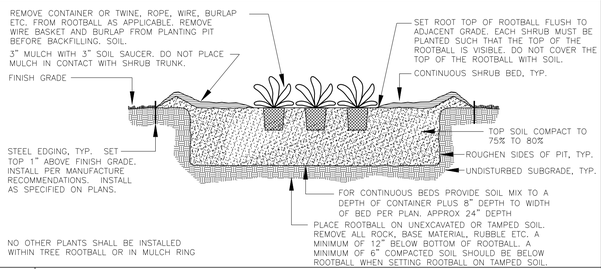
19 OF 30



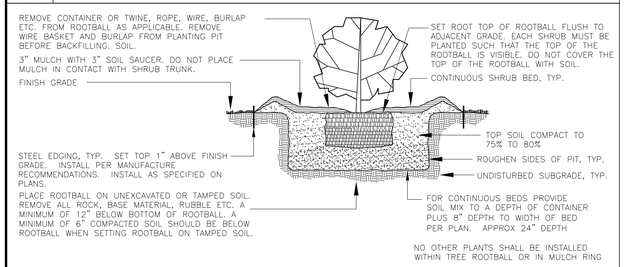
1 / 791 **TREE PLANTING DETAIL (SINGLE TRUNK) GREATER THAN 3" CALIPER** NO SCALE



2 / 791 **TREE STAKING DETAIL** NO SCALE



3 / 791 **PERENNIAL / GROUNDCOVER PLANTING DETAIL** NO SCALE



4 / 791 **SHRUB PLANTING DETAIL** NO SCALE

REGISTERED LANDSCAPE ARCHITECT
DAVID J. CAZARES
1871
STATE OF TEXAS
04 October 2024

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LANDSCAPE DETAILS

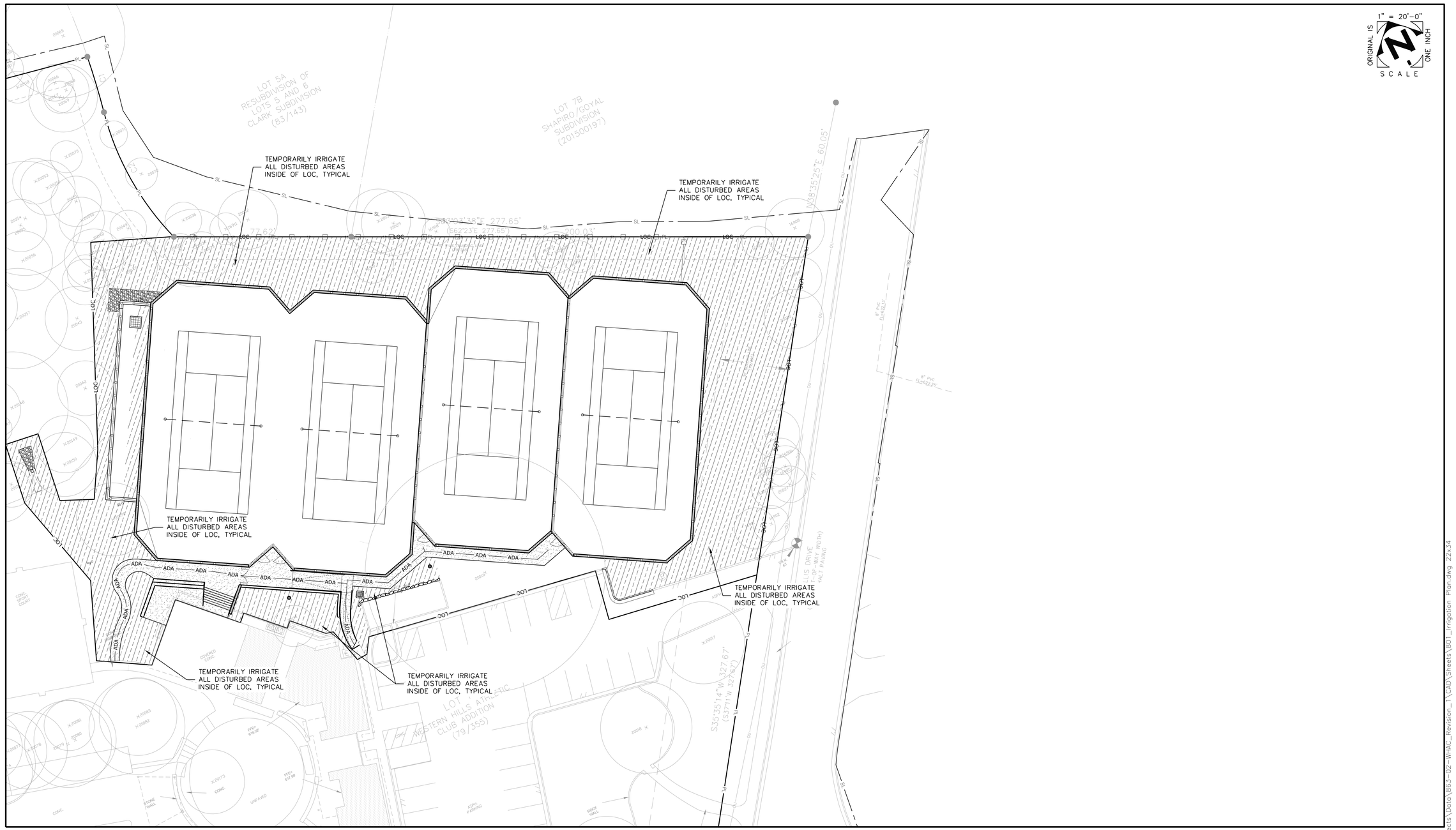
Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

791

20 OF 30

File: \\mwmdata\MWMProjects\Data\863-02-WHAC_Revision_1\CAD\Sheets\791 Landscape Details.dwg 22x34



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DAVID J. CAZARES
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04 October 2024

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0 1"

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IRRIGATION PLAN

Western Hills Athletic Club
4801 Rollingwood Drive
Rollingwood, TX 78746

PLOTTED: 10/4/2024
JOB NO: 863-02

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COORDINATION

1. The Contractor shall compare the Landscape, Structural, Civil, and other series drawings and report any discrepancies between each set of drawings and within each set of drawings prior to fabrication and installation of any structural members.

2. Only larger sleeve openings and framed openings in structural framing component members are indicated on the Structural Drawings. However, all sleeves, inserts and openings, including frames and/or sleeves shall be provided for passage, provision and/or incorporation of the work of the contract, including but not limited to Mechanical, Electrical and Plumbing work. This work shall include the coordination of sizes, alignment, dimensions, position, locations, elevations and grades as required to serve the intended purpose. Openings not indicated on the Structural Drawings, but required as noted above, shall be submitted to the Engineer for review.

3. Refer to Civil drawings for floor elevations, slopes, drains and location of depressed and elevated floor areas.

4. Compatibility of the structure and provisions for building equipment supported on or from structural components shall be verified as to size, dimensions, clearances, accessibility, weights and reaction with the equipment for which the structure has been designed prior to submission of shop drawings and data for each piece of equipment and for structural components. Differences shall be noted on the submittals. Compatibility of the structure and provisions for equipment supported on or from structural components shall be verified as to size, dimensions, clearances, accessibility, weights and reaction with the equipment for which the structure has been designed prior to submission of shop drawings and data for each piece of equipment and for structural components. Differences shall be noted on the submittals.

5. Shop drawings shall be prepared for all structural items and submitted for review by the Engineer. Structural Drawings shall not be reproduced and used as shop drawings. All items deviating from the Structural Drawings or from previously submitted shop drawings shall be clouded.

6. The details designated as "Typical Details" apply generally to the Structural Drawings in all areas where conditions are similar to those described in the details.

7. All dimensions and conditions of existing construction shall be verified at the job site prior to the preparation of shop drawings. Differences between existing construction and that shown on the Structural Drawings shall be referred to the Architect. Differences shall also be clouded on the shop drawings.

8. All structural elements of the project have been designed by the Engineer to resist the required code vertical and lateral forces that could occur in the final completed structure only. It is the responsibility of the Contractor to provide all required bracing during construction to maintain the stability and safety of all structural elements during the construction process until the lateral-load resisting or stability-providing system is completely installed and the structure is completely tied together. Temporary supports shall not result in the overstress or damage of the elements to be braced nor any elements used as brace supports.

9. The Contract Structural Drawings and Specifications represent the finished structure, and except where specifically shown, do not indicate the means or methods of construction. The Contractor and their Sub-Contractors shall supervise and direct the Work and shall be solely responsible for all construction means, methods, procedures, techniques, sequences and safety measures including, but not limited to, adherences to all OSHA guidelines. The Engineer shall not have control of, and shall not be responsible for, construction means, methods, techniques, sequences or procedures, for safety precautions and programs in connection with the Work, for the acts or omissions of the Contractor, Subcontractors, or any other person performing any of the Work, or for the failure of any of these persons to carry out the Work in accordance with the Structural Contract Documents.

10. Where conflict exists among the various parts of the Structural Contract Documents, Structural Drawings, Structural Notes, and Specifications, the strictest requirements, as indicated by the Engineer, shall govern.

11. Periodic site observation by field representatives of Encotech is solely for the purpose of determining if the Work is proceeding in accordance with the Structural Contract Documents. This limited site observation is not intended to be a check of the quality or quantity of the Work, but rather a periodic check in an effort to inform the Owner against defects and deficiencies in the work of the Contractor.

12. These structural drawings do not address water issues as it relates to but not limited to site drainage, roof runoff, or water introduced by adjacent properties. Adequate drainage shall be provided to limit the effects of erosion and to maintain the integrity of the structural system described. Water issues and/or waterproofing are the responsibility of the Architect and Contractor and are beyond the scope of these documents.

CODES AND REFERENCED REPORTS

1. The General Building Code used as the basis for the structural design is as follows:
   A. International Building Code, 2015 Edition

1. Structural Loading: Minimum Design Loads and Associated Criteria for Buildings and Other Structures, American Society of Civil Engineers, ASCE 7, as reference by the General Building Code.

2. Structural Concrete: Building Code Requirements for Reinforced Concrete, American Concrete Institute, ACI 318, as referenced by the General Building Code.

3. Geotechnical Report: Foundation elements have been designed in accordance with information provided in the following geotechnical report:

Geotechnical Engineer:	Terracon
Report Number:	96205112
Date:	07/31/2020

DESIGN LOADS

1. Dead Loads include the self-weight of the structural elements

2. Live Loads
   A. Tennis courts — 100 psf

3. Snow Loads
   A. Ground snow load, Pg — 5 psf

4. Seismic Loads
   A. The structure and structural components of the building have been designed in accordance with General Building Code with the following criteria:

a.	Risk Category	II
b.	Seismic Importance Factor: Ie	1.0
c.	Site Class	D
d.	Seismic Design Category	A
e.	Spectral Response Coefficients	
	• Ss (%g)	0.053
	• S1 (%g)	0.031
	• SDS	0.056
	• SD1	0.049
f.	Basic Seismic-force-resisting system	
	• Ground-supported cantelever wall	
g.	Response Modification Factor(s), R	1.5
h.	Seismic Response Coefficient(s), Cs	SDS/(R/Ie)
i.	Design Base Shear, V	Cs*W
j.	Analysis Procedure Used	Equivalent Lateral Force

5. Wind Loads
   A. Wind lateral load on structural frame is based on ASCE 7 using the following:

a.	Basic Wind Speed	(LRFD)	115 mph
		(ASD)	83 mph
b.	Exposure		C
c.	Internal Pressure Coefficient, Gcpi		+/-0.18
d.	Risk Category		II

SUBMITTALS

1. Shop drawings shall be prepared for all structural items and submitted for review by the Engineer. Structural Drawings shall not be reproduced and used as shop drawings. All items deviating from the Structural Drawings or from previously submitted shop drawings shall be clouded.

2. Contractor shall review shop drawings for compliance with the Structural Drawings and shall certify that they have done so by a stamp noting that the drawings have been "Approved" and which bears the signature (or initials) of an authorized representative of the Contractor and the date. Submittals which do not reflect the Contractor's approval, signature and date will be returned without review.

3. Contractor shall be responsible for delays caused by rejection of inadequate shop drawings.

4. Where review and return of shop drawings is required or requested, the Engineer will review each submittal and, where possible, return within two (2) weeks of receipt.

5. Corrections or comments on shop drawings or manufacturer's data sheets do not relieve the Contractor from compliance with requirements of the plans and specifications. Engineer's review is for general conformance with the requirements of the Structural Drawings. Contractor is responsible for confirming and correcting all quantities and dimensions, selecting fabrication processes and techniques of construction, and coordinating the work with that of all other contractors.

6. Refer to individual sections for specific submittal requirements.

7. Contractor shall provide submittals electronically to Architect. Architect will provide to Engineer for review and comment. Engineer will return reviewed submittal to Architect for distribution to the Architect, Owner, and Contractor. Contractor will be responsible for providing and distributing Engineer's comments to their subcontractors.

EXCAVATION PROTECTION

1. The sides of all excavations greater than 5'-0" in depth shall be laid back to a slope of 2 horizontal to 1 vertical, unless the following applies:
   A. A steeper slope is allowed by the Geotechnical Engineer for the particular location and site conditions in question.
   B. A temporary retention system is indicated on the Structural Drawings.
   C. An alternative protective system is submitted by the Contractor and allowed by the Owner.

2. Contractor shall submit drawings and calculations sealed by a Registered Engineer licensed in the state having jurisdiction at the project site for the design of any temporary retention or alternative protective systems. Temporary retention or alternative protective systems shall be designed to resist the soil pressures stipulated in the referenced geotechnical report. In addition, the design shall consider surcharges created by construction equipment, excavation spoil, and other surface encumbrances.

3. Contractor shall comply with all Occupational Safety and Health Administration standards and all other regulatory agency standards regarding excavation safety.

SITE PREPARATION

2. After demolition of the existing structure, construction areas shall be stripped of all vegetation,concrete, loose soils, fill soils, top soils, construction debris, and other unsuitable materialcurrently present at the site. Roots of trees to be removed within construction areas, if any, shallbe grubbed to full depths, including the dry soil around the roots. All remnants of existingfoundations shall be completely excavated and removed to at least 2 feet below finished grades.If any unusual items are unearthed during or after demolition, please contact us for furtherevaluation. A geotechnical engineer shall be retained to assist in evaluating exposed subgradesduring earthwork so that unsuitable materials, if any, are removed at the time of construction.

3. Once initial subgrade elevations have been achieved (i.e., after cuts but prior to fills), the exposed subgrade in all construction areas (except landscaping) shall be carefully and thoroughly proof-rolled with a 20-ton pneumatic roller, fully-loaded dump truck, or similar equipment to detect weak zones in the subgrade. Proof-rolling is not necessary in intact Stratum 3 limestone subgrade areas. Weak areas detected during proof-rolling, zones containing debris or organics, and voids resulting from removal of tree roots, existing foundation elements, utilities, fill, boulders, etc. shall be removed and replaced with soils exhibiting similar classification, moisture content, and density as the adjacent in-situ soils (or flowable fill).

4. The Edwards Formation limestone could exhibit voids, clay-filled zones, and/or solution activity which may impact construction. If voids or other significant solution features are encountered during site preparation/excavation operations, the project geotechnical engineer shall be contacted to evaluate the feature from a geotechnical engineering standpoint.

5. For the proposed tennis court areas and 5ft beyond, the on-site soils be excavated at least 20 inches below the proposed slab. The removed soils shall be replaced with properly compacted select fill within all structural areas up to final grades. If Stratum 3 limestone is encountered within 12 inches of the final subgrade elevation, the limestone shall beover excavated such that at least 6 inches of properly compacted select fill can be provided under the gravel layer.

6. Structural fill/select fill underneath the tennis court and 5 feet beyond shall consist of CL, SC, and/or GC soils according to the USCS Classification system. Select fill shall also comply with one of the following:
   - TxDOT Item 247, Type A, Grade 3
   - Percent retained on No. 4 Sieve ≤ 40 percent with 5≤PI≤20 and rocks ≤ 4 inches in maximum dimensions
   - Crushed concrete (TxDOT Item 247, Type D, Grade 3 or better)

7. Select fill shall consist of approved materials free of organic matter and debris. A sampleof each material type shall be submitted to the Geotechnical Engineer for evaluation prior to use on this site.

8. Based on the laboratory testing performed during this exploration, the excavated Stratum 1 soils are not suitable for re-use as select fill.

9. The excavated Stratum 2 soils and Stratum 3 limestone material may be acceptable for re-use as select fill provided that it is processed to meet the Structural Fill performance criteria above and as approved by the project geotechnical engineer. After initial processing of the fill material, samples shall be submitted to the project geotechnical engineer for evaluation of proper gradation, plasticity index, and maximum rock size priorto re-use as select fill. Periodic testing shall be performed throughout the material excavationphase to check for conformance with the select fill requirements given above as reccomended by the project geotechnical engineer.

10. Structural fill/select fill less than 5 feet in depth shall be compacted to 95% of the maximum dry unit weight per the standard proctor trst (ASTM D698) at a moisture content of within 3% of optimum.

11. Structural fill/select fill greater than 5 feet in depth shall be compacted to 100% maximum dry unit weight per the standard proctor trst (ASTM D698) at a moisture content of within 3% of optimum.

12. Structural fill shall be placed in 8 inch loose lifts when more than 3feet away from retaining walls. When within 3 feet away from retaining walls, light construction equipment must be used and lift thickness shall be reduced to 4-6 in.

13. When the existing structures are demolished, the Earthwork Contractor may uncover structure pad select fill. The Contractor shall perform several test pit excavations (under observation of the geotechnical engineer) in the fill pad area to assess the thickness of the existing select fill. At that same time,the project geotechnical engineer shall obtain samples for testing to ensure the existing select fill meets the project structural fill requirements.

14. The upper 6 in of select fill may be replaced with crushed limestone at the contractor's option.

15. Provide a vapor retarder that conforms to ASTM E1745, Class A or better with a maximum water vapor permeance of 0.01 perms per ASTM E96. Vapor retarder shall be no less than 15 mils thick.

16. The above recommendations have been prepared in accordance with the referenced geotechnical report.

CONTROLLED BACKFILL BEHIND BASEMENT AND RETAINING WALLS

1. Backfill material shall be clean gravel compacted to between 95% and 100% of Standard Proctor (ASTM D 698) maximum dry density. Backfill shall not be overcompacted.

2. Compaction and moisture content of controlled backfill shall be verified by an independent testing laboratory.

3. The top 2 ft of material below the ground surface shall consist of relatively impervious material, with a liquid limit between 40 and 50 percent and a plasticity index between 20 and 30. This material shall be placed in 6" lifts and compacted at optimum moisture content, to 95 percent of the maximum density per ASTM D698.

4. Backfill material shall not be placed against foundation walls until all supporting slabs, beams, struts, etc., have attained their 28 day design strength unless proper bracing is installed.

5. Where backfill is required on both sides of a structure or building element, backfill shall be placed simultaneously along both sides so that the backfill height on one side does not exceed the height on the opposite side by more than 4'-0".

6. Compaction and moisture content of subgrade and each lift of structural fill shall be inspected and approved by a qualified engineering technician, supervised by a Geotechnical Engineer.

7. Design of retaining walls is based on equivalent hydrostatic pressures of 36 pcf, assuming free draining backfill and use of weep holes.

8. The above recommendations have been prepared in accordance with the referenced geotechnical report.

DESIGN BY OTHERS

1. In accordance with the Specifications the items listed below are not included in the Contract Documents. Design of these elements shall be the responsibility of the Contractor, and shall be designed and sealed by a registered professional engineer licensed in the state having jurisdiction at the project site.
   A. Guardrail and Handrail Systems
   B. Excavation Support and Protection
   C. Specialty Retention Systems

2. Design of the items listed above shall be in accordance with the General Building Code, and shall include all attachments to the structure.

DEFERRED SUBMITTALS

1. In accordance with the General Building Code, Section 107.3.4.2, the following submittals will not be issued at the time of permit application, and will be "deferred" to a later date. Deferred submittals are required to be submitted to the Building Official. However, these submittals shall be submitted and approved by the Registered Design Professional in Responsible Charge (RDPiRC) prior to submitting to the Building Official. Deferred submittals are design items being delegated to the Contractor which shall be designed and sealed by a registered professional engineer licensed in the state having jurisdiction at the project site.

2. The following structural components shall be treated as deferred submittals:
   A. Guardrail and Handrail Systems
   B. Excavation Support and Protection
   C. Specialty Retention Systems

3. Design of the items listed above shall be in accordance with the General Building Code, and shall include all attachments to the structure.

4. Work associated with Deferred Submittals shall not be performed until the deferred submittal documents have been approved by the Building Official.

5. Refer to the Contract Documents for additional Deferred Submittal items.

SHEET LIST

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0 1"
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STRUCTURAL NOTES

WESTERN HILLS ATHLETIC CLUB
4801 Rollingwood Drive
Austin, TX 78746

PLOTTED: 10/04/24
JOB NO 863-02:

S-001

1 OF 9

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CONCRETE FOOTINGS

1. Concrete footing design is based on an allowable net bearing capacity of 4,000 psf in accordance with the referenced geotechnical report.

2. Bearing stratum shown on the footing details is Stratum 3 Limestone.

3. Footings not specifically located on the plan shall be located on centerline of pilaster or column above. Where no pilaster or column occurs, locate on centerline of wall or beam.

4. Elevation of top of plinths/footings, unless noted otherwise on the Structural Drawings, is at the bottom of the deepest intersecting beam or wall supported by the footing.

5. Footing excavations shall be to neat lines and shall be free of loose or wet materials.

6. Footing reinforcing and concrete shall be placed immediately after excavations are complete; in no case shall a footing be excavated that cannot be placed by the end of the workday.

7. Reinforcing steel shop drawings shall include placing drawings for templates to set dowels in footings.

8. All footings shall be inspected by a representative of a qualified Geotechnical Engineering firm in order to ensure that the proposed bearing material has been reached in accordance with the recommendations given in the referenced geotechnical report and that the footing has been constructed to specified size, with detailed reinforcing, and to specified tolerances.

CAST-IN-PLACE CONCRETE

1. Classes of Concrete: All concrete shall conform to the requirements as specified in the table below, unless noted otherwise on the Structural Drawings:

Concrete Mix Schedule

DESCRIPTION OF USE	STRENGTH (psi)	AGG. TYPE	AGG. SIZE	SLUMP (inches)	MAX W/C	EXPOSURE CLASSES	AIR CONTENT
Grade Beams and Footings	3000	NWT	1 1/2"	5-7	-	F0/S0/W0/C1	-
Slab-on-Grade	3000	NWT	1"	3-5	-	F0/S0/W0/C1	-
Retaining Walls	3000	NWT	1"	3-5	0.45	F0/S0/W0/C1	3 - 6%

A. "NWT" refers to normal concrete having air dry unit weight of approximately 145 PCF (ASTM C33 aggregate).
B. Where w/c ratio is not indicated in the Concrete Mix Schedule, it shall be as necessary to meet strength requirements.
C. Where the w/c ratio is shown, it shall be adhered to regardless of strength requirements.
D. "Strength" is required compressive cylinder strength at an age of 28 days.

1. A maximum of 20% of the cementitious materials used in mix designs may be replaced with class C or F fly ash.

2. Provide 5 percent plus or minus 1 1/2 percent of entrained air in concrete permanently exposed to the weather and elsewhere at the contractor's option.

3. Horizontal construction joints in concrete placements shall be permitted only where indicated on the Structural Drawings. All vertical construction joints shall be made in the center of spans in accordance with the typical details. Contractor shall submit proposed locations for construction joints not shown on the Structural Drawings for review by the Architect and Engineer. Additional construction joints may require additional reinforcing as specified by the Engineer which shall be provided by the contractor at no additional cost to the owner.

4. Embedded conduits, pipes, and sleeves shall meet the requirements of ACI 318, Section 26.8, including the following:
   A. Conduits and pipes embedded within a slab, wall, or beam (other than those passing through) shall not be larger in outside dimension than 1/3 the overall thickness of the slab, wall or beam in which they are embedded.
   B. Conduits, pipes and sleeves shall not be spaced closer than three diameters or widths on center.

5. Concrete placements shall not exceed 10,000 square feet or 100 linear feet on each side without prior approval by the engineer for each placement.

6. Submittal: Submit proposed mix designs in accordance with ACI 301, chapter 3.9. Each proposed mix design shall be accompanied by a record of past performance based on at least 30 consecutive strength tests, or by three laboratory trial mixtures with confirmation tests.

7. Concrete sampling for quality assurance: Concrete that is pumped shall be sampled at the point of discharge from the truck.

8. For each concrete mixture on the project placed in any one day, obtain samples of fresh concrete in accordance with ASTM C172.

9. Obtain one composite sample for each 150 cubic yards of concrete or 5000 square feet of surface area of slabs or walls, or fractions thereof.

10. Each sample used to mold strength test specimens (ASTM C31) shall be tested for slump (ASTM C143), air content (ASTM C231), and temperature (ASTM C138).

11. Conduct strength tests by making and curing test specimens in accordance with ASTM C31 and testing them according to ASTM C39. Test one (1) cylinder at 7 days for information. Concrete strengths for acceptance shall be the average of two (2) 6" by 12" or three (3) 4" by 8" cylinders tested at 28 days.

12. Inspect all forms, foundation preparation, reinforcement, embedded items, and reinforcement placement prior to placement of concrete for compliance with the contract documents and shop drawings. All instances of non-compliance shall be immediately brought to the attention of the contractor for correction.

13. Report test and inspection results to the owner, Architect/Engineer, contractor, and concrete supplier within 7 days after the tests and inspections were performed.

CONCRETE REINFORCING

1. Concrete reinforcement for the project shall conform to the following:
   A. All reinforcing steel shall be new billet steel in accordance ASTM A615, Grade 60, unless noted otherwise in the Structural Drawings or these notes.

2. Detailing of reinforcing steel shall conform to the American Concrete Institute 315 Detailing Manual and all hooks and bends in reinforcing bars shall conform to ACI detailing standards, unless noted otherwise on the Structural Drawings.

3. In unscheduled grade beams, walls, and slabs, detail reinforcing as follows:
   A. Class A lap beam top reinforcing bars at mid span.
   B. Class A lap beam bottom reinforcing bars at the supports.
   C. Provide Class B lap at other location pending Engineer's approval.
   D. Provide standard hooks in top bars at cantilever and discontinuous ends of beams, walls and slabs.
   E. Provide corner bars for all horizontal bars at the inside and outside faces of intersecting beams or walls. Corner bars are not required if horizontal bars are hooked.
   F. Provide 2-#4 diagonal bars at all slab re-entrant corners placed under the top mat of steel.

4. Welding of reinforcing steel will not be permitted unless specifically shown on the Structural Drawings.

5. Heat shall not be used in the fabrication or installation of reinforcement.

6. Reinforcing steel clear cover shall be as follows:
   A. Footings — 3"
   B. Slab-on-grade — 3/4" top
   C. Walls — 2"

7. Submittal: Submit shop drawings for fabrication, bending, and placement of concrete reinforcement. Comply with ACI 315 "Details and Detailing of Concrete Reinforcement". Do not reproduce the Structural Drawings for use as shop drawings.

POST-TENSIONED SLAB-ON-GRADE

1. Tendon placement, integrity of protective wrapping, and stressing operation shall be observed by the Testing Laboratory.

2. Post-tensioning reinforcing shall be 1/2 inch diameter, seven wire, stress relieved strand conforming to ASTM A416 with a minimum yield strength of 270 ksi.

3. All anchorages, couplers and miscellaneous hardware shall be standard products as manufactured by the Post-Tensioning Supplier and shall be approved by ICC-ES. Anchorages shall conform to ACI 318. Minimum concrete cover over anchorages shall be 2 inches.

4. Tendons shall be unbonded and protected from corrosion by plastic sheathing and grease conforming to the requirements of PTI Specification for Unbonded Single Strand Tendons, latest edition. Sheathing shall have a minimum thickness of 25 mils. Sheathing shall be continuous between anchorages. Tears in sheathing shall be repaired.

5. Place a minimum of two #4 bars continuous along edges behind all slab anchorages, and two # 4 x 7'-0" hairpins at slab corners. Place a minimum of two #4 bars, horizontal and vertical, with appropriate development length behind all beam anchorages. Provide additional bursting reinforcement where required by calculations.

6. Tendons shall be fabricated with sufficient length beyond edge form to allow stressing. Fixed end and intermediate anchors shall be placed on the tendon prior to shipment to the jobsite.

7. Tendons shall be placed to conform to the control points shown on the Structural Drawings. Profile dimensions locate the center of gravity of the tendon or tendon group steel (CGS) measured from the member soffit, unless noted otherwise.

8. Tendons shall be secured to a sufficient number of positioning devices, spaced at a maximum of 3'-6" on center, to ensure correct location during and after concrete placement. Twisting or entwining of individual tendons within a bundle shall not be permitted. A maximum of 5 strands may be bundled.

9. Slight deviations in the spacing of slab tendons will be permitted if required to avoid openings, inserts, and dowels which are specifically located. Tendons shall clear openings by 6" minimum, and shall have a maximum horizontal deviation of 1:6 beginning no closer than 2'-0" from opening edge. If tendons interfere with other tendons, contact the Engineer before relocating tendons.

10. Tendons shall not be stressed over 120 feet in a one end pull or 240 feet in a two end pull except as approved by the Engineer. A record of all initial stressing forces and elongations shall be made and submitted to the Engineer within 48 hours of stressing. Lift-off shall not be performed unless directed by the Engineer. Lift-off stressing force and elongations shall be submitted to the Engineer for review. Measured elongations shall not vary by more than 7% from the calculated values, except as approved the Engineer.

11. After stressing is complete and tendon elongations have been approved by the Engineer, tendons shall be cut (sheared) off to provide a minimum 3/4 inch cover. Fill anchor recesses flush with non-shrink epoxy grout.

12. If concrete is placed by pump, horses shall be provided to support the hose. The hose shall not be allowed to rest on the tendons. Concrete shall not be placed by bucket directly on the tendons. The Contractor shall take precautions to assure complete consolidation on concrete behind post-tensioning anchorages.

13. Embedded conduits, pipes, or sleeves shall not be placed within 18 inches of a post-tensioning anchorage.

14. Grout or concrete containing chlorides, fluorides, sulfides, nitrates, or other substances detrimental to prestressing steel shall not be used.

15. Contractor shall accurately locate post tensioned tendons prior to drilling or cutting the slab for installation of expansion anchors, etc. Post tensioned tendons shall not be damaged.

16. Provide two layers of 10 mil (or 15 mil) conforming to ASTM E1745 Class C (or Class A) over a 6 mil polyethylene vapor barrier under slab. Place in accordance with the manufacturer's directions.

17. Stress the slab tendons the day after concrete placement to 25% of the specified jacking force, minimum, or as determined by the PT supplier. Restress the tendons to 100% of the specified jacking force after the concrete has attained at least 75% of the specified 28 day strength.

18. Submittal: Contractor shall submit shop drawings showing the following:
   A. Tendon layouts and profiles, stressing and dead-end anchor details, stressing sequence, tendon forces and detail design calculations, openings and other related details.
   B. Calculations for tendon forces and elongations, anchorage stresses, and system losses.
   C. Certified mill reports for all prestressing reinforcing steel.

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0 1"

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STRUCTURAL NOTES

WESTERN HILLS ATHLETIC CLUB
4801 Rollingwood Drive
Austin, TX 78746

PLOTTED: 10/04/24
JOB NO 863-02:

S-002

SPECIAL INSPECTIONS

The following Statement and Schedules of Inspections are those Special Inspections and Tests that shall be performed for this project. Special Inspectors shall reference these plans and IBC Chapter 17 for all special inspection requirements.

The owner shall retain an "approved agency" per IBC 1703 to provide special inspections for this project. Special Inspectors shall be qualified persons per IBC 1704.2.1. Submit copies of all inspection reports to the Architect/Engineer and the Authority Having Jurisdiction for review. In addition to special inspection reports and tests, submit reports and certificates noted in IBC 1704.5 to the Authority Having Jurisdiction. Final special inspection reports will be required by each special inspection firm per IBC 1704.2.4.

STATEMENT OF SPECIAL INSPECTIONS:

This statement of Special Inspections has been written with the understanding that the Building Official will:

- Review and approve the qualifications of the Special Inspectors
- Monitor the special inspection activity on the project site to assure that Special Inspectors are qualified and performing their duty as state within this statement.
- Review all Special Inspection Reports submitted to them by the Special Inspector Perform inspections as required by IBC Section 110.3.

SPECIAL INSPECTION OF CONCRETE CONSTRUCTION

Special inspection and tests of concrete construction shall be performed in accordance with this section and Table 1705.3 with the following exceptions:

- Special inspections shall not be required for:
  1. Isolated spread concrete footings of buildings three stories or less above the grade plane fully supported on earth or rock.
  2. Continuous footings supporting walls of buildings three stories or less above the grade plane that are fully supported on earth or rock where:
     a. The footings support walls of light frame construction.
     b. The footings are designed in accordance with IBC Table 1809.7.
     c. The structural design of the footing is based on a specified compressive strength, f'_c , not more than 2,500 psi.
  3. Nonstructural concrete supported directly on the ground, including prestressed slabs on grade, where the effective prestress in the concrete is less than 150 psi
  4. Concrete foundation walls constructed in accordance with Table 1807.1.6.2.
  5. Concrete patios, driveways, and sidewalks, on grade.

SCHEDULES OF SPECIAL INSPECTIONS:

TABLE 1705.3
REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION TASK	FREQUENCY		REFERENCED STANDARD	IBC REFERENCE	REQUIRED? Y/N
	CONTINUOUS	PERIODIC			
1. Inspect reinforcement, including pre-stressing tendons, and verify placement.	—	X	AC I 318 Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4	Y
2. Reinforcing bar welding: a. Verify weldability of reinforcing bars other than ASTM A706. b. Inspect single pass fillet weld maximum 5/16". c. Inspect all other welds.	— — X	X X —	AWS D1.4 ACI 318: 26.6.5	—	N/A
3. Inspect anchors cast in concrete.	—	X	ACI 318: 17.8.2	—	Y
4. Inspect anchors post-installed in hardened concrete members: a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads. b. Mechanical anchors and adhesive anchors not defined in 4a.	X —	— X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	— —	Y Y
5. Verify use of required design mix.	—	X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1-3	Y
6. Prior to concrete placement, fabricate specimens, for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	—	ASTM C172 ASTM C31 ACI 318: 26.12	1908.10	Y
7. Inspect concrete and shotcrete placement for proper application techniques.	X	—	ACI 318: 26.5	1908.6-8	N/A
8. Verify maintenance of specified curing temperature and techniques.	—	X	ACI 318 :26.5.3 - 26.5.5	1908.9	Y
9. Inspect Prestressed concrete for: a. Application of prestressing forces. b. Grouting of bonded prestressing tendons.	X X	— —	ACI 318: 26.10	— —	N/A N/A
10. Inspect erection of precast concrete members.	—	X	ACI 318: 26.11.2	—	N/A
11. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	—	X	ACI 318: 26.11.2	—	Y
12. Inspect formwork for shape, location and dimensions of the concrete member being formed.	—	X	ACI 318: 26.11.1.2(b)	—	Y

TABLE 1705.6
REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS

VERIFICATION AND INSPECTION TASK	FREQUENCY DURING TASK LISTED		REQUIRED? Y/N
	CONTINUOUS	PERIODIC	
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	—	X	Y
2. Verify excavations are extended to proper depth and have reached proper material.	—	X	Y
3. Perform classification and testing of compacted fill materials	—	X	Y
4. Verify use of proper materials, densities and lift thickness during placement and compaction of compacted fill.	X	—	Y
5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.	—	X	Y

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CODE REQUIRED SPECIAL INSPECTIONS

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4801 Rollingwood Drive
Austin, TX 78746

PLOTTED: 10/04/24
JOB NO 863-02:

S-003

3 OF 9

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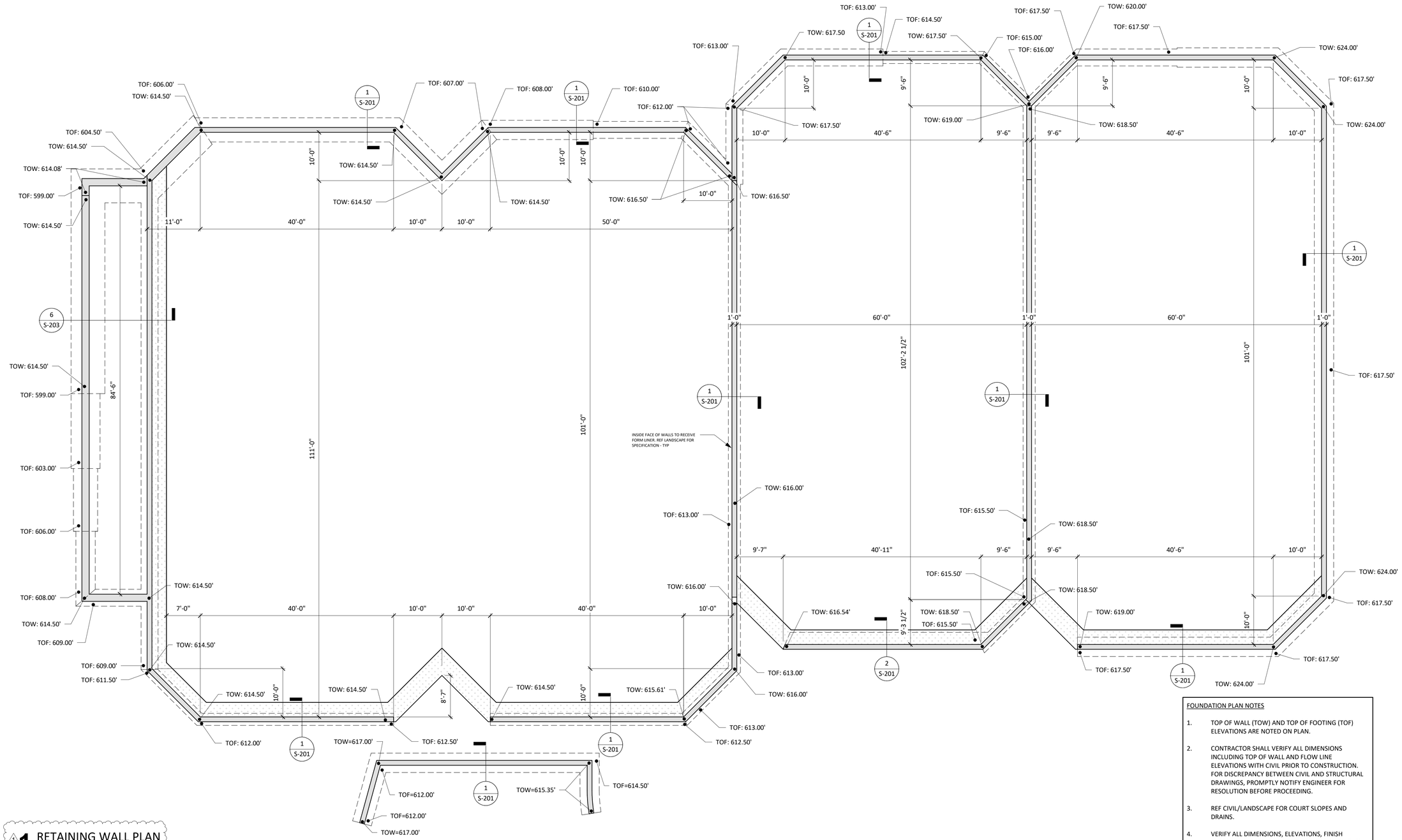

1 RETAINING WALL PLAN

SCALE: 1" = 10'-0"

FOUNDATION PLAN NOTES

1. TOP OF WALL (TOW) AND TOP OF FOOTING (TOF) ELEVATIONS ARE NOTED ON PLAN.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS INCLUDING TOP OF WALL AND FLOW LINE ELEVATIONS WITH CIVIL PRIOR TO CONSTRUCTION. FOR DISCREPANCY BETWEEN CIVIL AND STRUCTURAL DRAWINGS, PROMPTLY NOTIFY ENGINEER FOR RESOLUTION BEFORE PROCEEDING.
3. REF CIVIL/LANDSCAPE FOR COURT SLOPES AND DRAINS.
4. VERIFY ALL DIMENSIONS, ELEVATIONS, FINISH SURFACES, SLOPES, DRAINS, CURBS, ETC. WITH CIVIL DRAWINGS PRIOR TO START OF CONSTRUCTION.

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RETAINING WALL PLAN

WESTERN HILLS ATHLETIC CLUB
4801 Rollingwood Drive
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S-101

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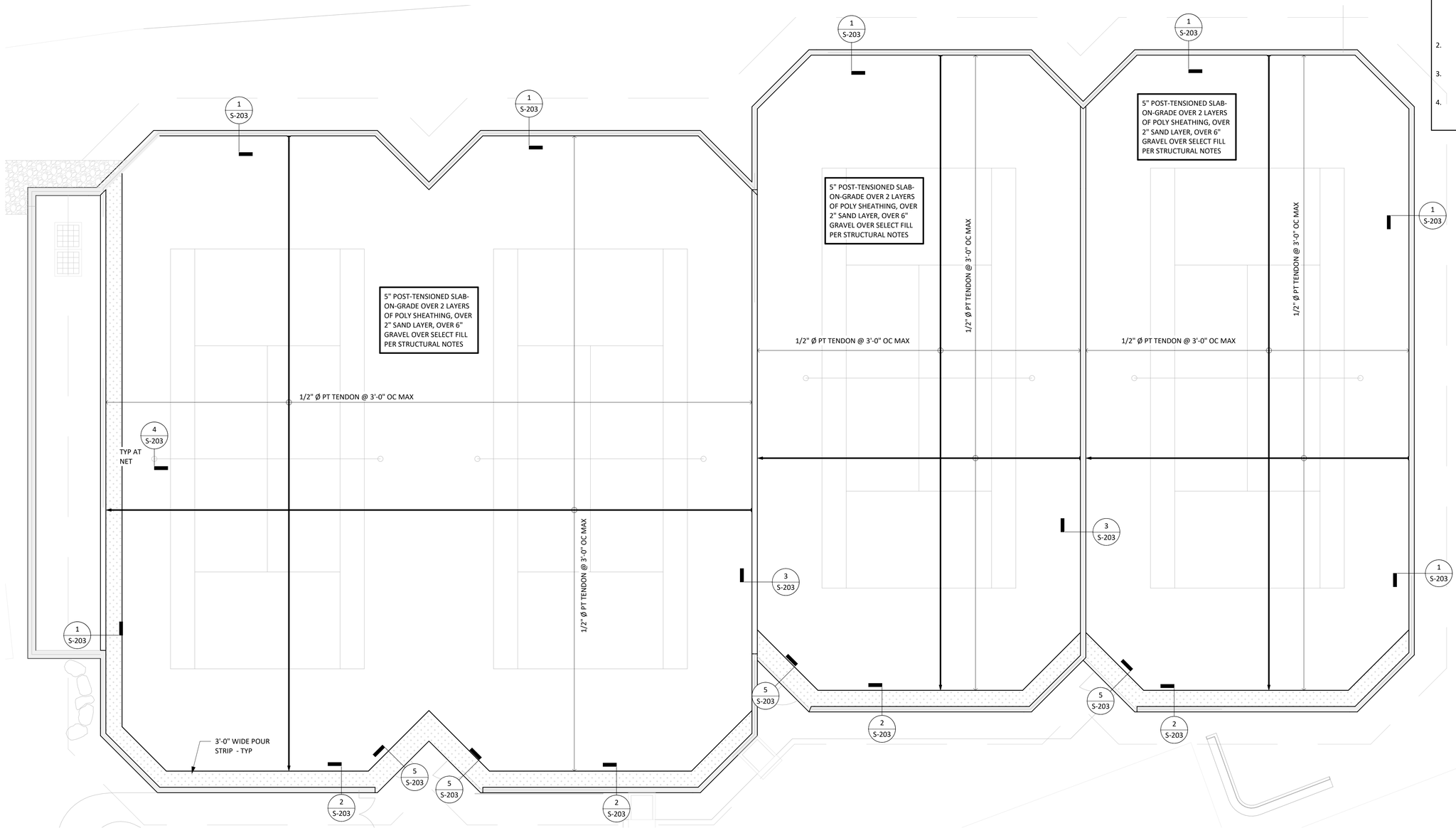

1 TENNIS COURT PLAN
SCALE: 1" = 10'-0"

FOUNDATION PLAN NOTES

1. PT TENDIONS ARE INDICATED AS FOLLOWS:

2. PT TENDONS SHALL BE STRESSED TO 27.3 KIPS PER TENDON AFTER ALL CALCULATED LOSSES.
3. REF CIVIL/LANDSCAPE FOR COURT SLOPES AND DRAINS.
4. VERIFY ALL DIMENSIONS, ELEVATIONS, FINISH SURFACES, SLOPES, DRAINS, CURBS, ETC. WITH CIVIL DRAWINGS PRIOR TO START OF CONSTRUCTION.

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TENNIS COURT PLAN

WESTERN HILLS ATHLETIC CLUB
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5 OF 9

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REINFORCEMENT SPLICE LENGTH SCHEDULE (SLABS, WALLS, & FOOTINGS)

BAR SIZE \ CLASS	f'c=3000 psi CONCRETE		f'c=4000 psi CONCRETE		f'c=5000 psi CONCRETE		f'c=6000 psi CONCRETE		f'c=7000 psi CONCRETE		f'c=8000 psi CONCRETE	
	"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"
#3	1'-0"	1'-1"	1'-1"	1'-1"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
#4	1'-1"	1'-5"	1'-0"	1'-3"	1'-0"	1'-1"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
#5	1'-8"	2'-2"	1'-5"	1'-10"	1'-3"	1'-8"	1'-3"	1'-6"	1'-1"	1'-5"	1'-0"	1'-4"
#6	2'-3"	3'-1"	'1-11"	2'-6"	1'-9"	2'-3"	1'-7"	2'-1"	1'-4"	1'-11"	1'-4"	1'-9"
#7	3'-8"	4'-9"	3'-2"	4'-1"	2'-10"	3'-8"	2'-7"	3'-4"	2'-5"	3'-1"	2'-3"	2'-11"
#8	4'-7"	5'-11"	4'-0"	5'-2"	3'-7"	4'-7"	3'-3"	4'-3"	3'-0"	3'-11"	2'-10"	3'-8"
#9	5'-7"	7'-3"	4'-10"	6'-4"	5'-2"	5'-7"	3'-9"	5'-1"	3'-8"	4'-9"	3'-5"	4'-5"
#10	6'-9"	8'-9"	5'-10"	7'-7"	5'-3"	6'-10"	4'-9"	6'-3"	4'-5"	5'-7"	4'-2"	5'-5"
#11	8'-0"	10'-5"	7'-11"	9'-0"	6'-2"	8'-0"	5'-8"	7'-4"	5'-3"	6'-10"	4'-11"	6'-4"

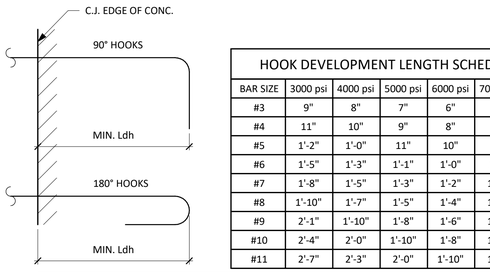
NOTE:

1. WHERE SPLICE TYPE IS NOT INDICATED, USE CLASS "B" SPLICE.
2. LAP LENGTHS LISTED ABOVE APPLY UNDER THE FOLLOWING CONDITIONS:
   A. WALL AND SLAB BARS ARE SPACED AT LEAST 2 BAR DIA OC.
   B. FOR UNCOATED AND ZINC-COATED (GALVANIZED) REINFORCEMENT.
   C. FOR REINFORCEMENT THAT CONFORMS DEFORMED NEW BILLET STEEL BARS IN ACCORDANCE TO ASTM A615 GR. 60.
3. FOR LIGHTWEIGHT CONCRETE, MULTIPLY TABULATIONS BY 1.3.
4. FOR HORIZ TOP BARS WITH 12" OF CONCRETE CAST BELOW, MULTIPLY TABULATIONS BY 1.3.
5. WHERE A LARGER BAR LAPS A SMALLER BAR, THE SMALLER SCHEDULED LAP LENGTH APPLIES.
6. WHERE DEVELOPMENT LENGTH "Ld" IS CALLED OUT ON DRAWINGS, USE CLASS A LAP LENGTH.
7. REFER TO "CONCRETE REINFORCING" SECTION OF THE STRUCTURAL NOTES FOR FURTHER INFORMATION.
8. FOR CMU REINFORCEMENT SPLICE LENGTH SCHEDULE, SEE CMU DETAILS.

LAP SPLICE SCHEDULE (SLABS, WALLS, & FOOTINGS)

1 TYPICAL DETAIL

SCALE: NTS



HOOK DEVELOPMENT LENGTH SCHEDULE, Ldh

BAR SIZE	3000 psi	4000 psi	5000 psi	6000 psi	7000 psi	8000 psi
#3	9"	8"	7"	6"	6"	6"
#4	11"	10"	9"	8"	8"	7"
#5	1'-2"	1'-0"	11"	10"	9"	9"
#6	1'-5"	1'-3"	1'-1"	1'-0"	11"	11"
#7	1'-8"	1'-5"	1'-3"	1'-2"	1'-1"	1'-0"
#8	1'-10"	1'-7"	1'-5"	1'-4"	1'-3"	1'-2"
#9	2'-1"	1'-10"	1'-8"	1'-6"	1'-5"	1'-4"
#10	2'-4"	2'-0"	1'-10"	1'-8"	1'-7"	1'-6"
#11	2'-7"	2'-3"	2'-0"	1'-10"	1'-9"	1'-7"

NOTES:

1. TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL WEIGHT CONCRETE.
2. FOR TABULATED BARS SIZES ONLY:
   A. IF CONCRETE COVER SATISFIES ACI 318-14, SECTION 25.4.3.2, THEN A MODIFICATION FACTOR OF 0.7 MAY BE APPLIED BUT THE LENGTH MUST NOT BE LESS THAN 8 x db NOR 6 IN.
   B. IF HOOK IS ENCLOSED IN TIES OR STIRRUPS PER ACI 318-14, SECTION 25.4.3.2, THEN A MODIFICATION FACTOR OF 0.8 MAY BE APPLIES BUT THE LENGTH MUST NOT BE LESS THAN 8 x db NOR 6 IN.
3. FOR EPOXY-COATED HOOKS, MULTIPLY THE TABULATED VALUES BY 1.2.

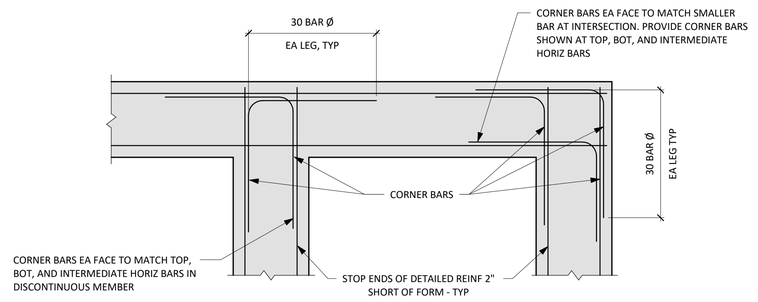
STANDARD HOOK SCHEDULE

2 TYPICAL DETAIL

SCALE: NTS

NOTES:

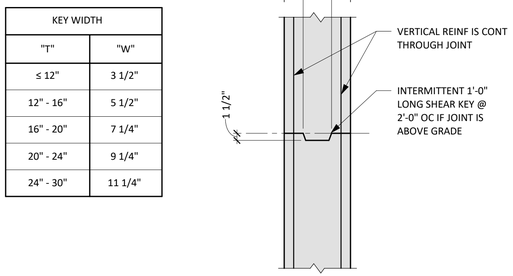
1. WHERE 90 DEGREE HOOKS ARE PROVIDED FOR TOP BARS, CORNER BARS MAY BE OMITTED AT TOP. WHERE 90 DEGREE HOOKS ARE PROVIDED FOR BOTTOM BARS, CORNER BARS MAY BE OMITTED AT BOTTOM.
2. MATCH SIZE, LOCATION AND NUMBER OF HORIZONTAL BEAM AND WALL BARS, EXCEPT THAT WHERE THERE ARE MORE THAN 2 TOP OR BOTTOM BARS, ONLY THE INSIDE AND OUTSIDE BARS MUST BE MATCHED.



CORNER BARS AT WALL OR GRADE BEAM INTERSECTION

3 TYPICAL DETAIL

SCALE: NTS

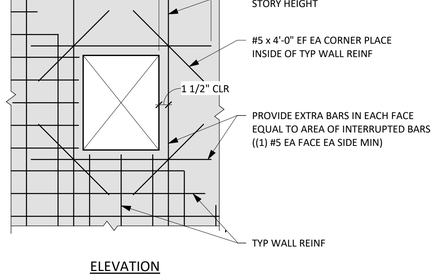


KEY WIDTH	
"T"	"W"
≤ 12"	3 1/2"
12" - 16"	5 1/2"
16" - 20"	7 1/4"
20" - 24"	9 1/4"
24" - 30"	11 1/4"

HORIZONTAL CONSTRUCTION JOINT IN WALLS

4 TYPICAL DETAIL

SCALE:NTS



ELEVATION

CONCRETE WALL OPENING

5 TYPICAL DETAIL

SCALE: NTS

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TBPE FIRM REGISTRATION NO.: F-1416
TBPLS FIRM REGISTRATION NO.: 10065600

NO.	DATE	DESCRIPTION	BY
1	10/04/24	REVISION 1	

0 1"

The bar above measures one inch on the original drawing. Adjust scales accordingly.

TYPICAL CONCRETE DETAILS

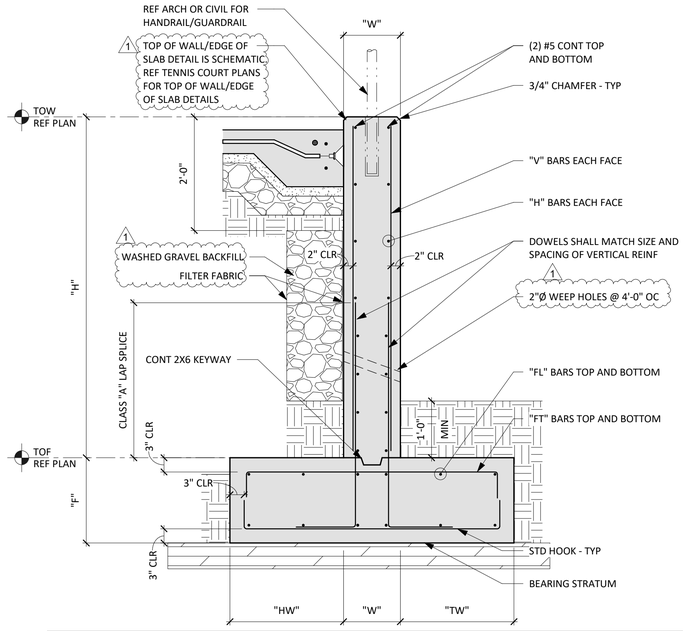
WESTERN HILLS ATHLETIC CLUB
4801 Rollingwood Drive
Austin, TX 78746

PLOTTED: 10/04/24
JOB NO 863-02:

S-200

6 OF 9

FILE: C:\Users\HamzahKhataw\Documents\22927 – Western Hills AC – S22_HamzahKhataw.rvt



NOTES:

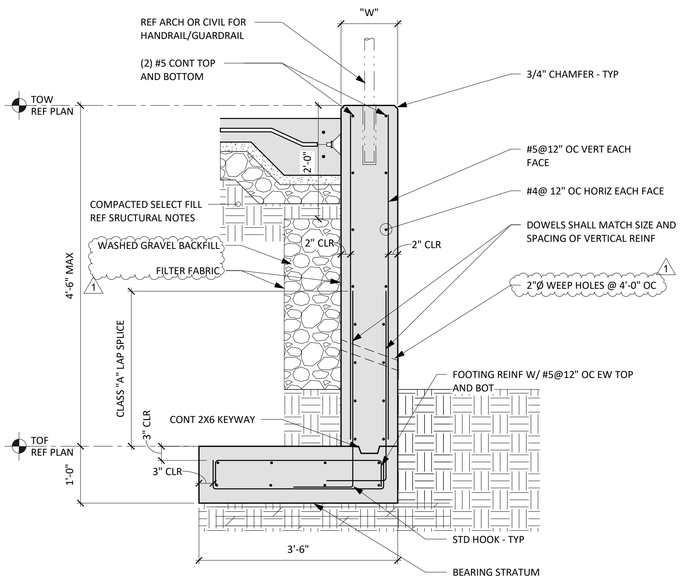
1. FOOTING SHALL BEAR ON STRATUM 3 LIMESTONE.
2. FOOTING EXCAVATION SHALL BE INSPECTED BY THE GEOTECHNICAL LABORATORY TO DETERMINE THAT THE PROPER BEARING STRATUM IS OBTAINED AND THAT EXCAVATIONS ARE PROPERLY CLEAN AND DRY BEFORE CONCRETE IS PLACED.
3. LOCATE CONTROL JOINTS AT 30'-0" OC MAX
4. LOCATE EXPANSION JOINTS AT 90'-0" OC MAX

DIMENSIONS					RETAINING WALL SCHEDULE REINFORCING			
"H"	"W"	"HW"	"TW"	"F"	"V"	"H"	"FT"	"FL"
≤3'-0"	1'-0"	0'-9"	0'-9"	1'-0"	#5@12"	#4@12"	#5@12"	#4@12"
≤4'-6"	1'-0"	1'-3"	1'-3"	1'-0"	#5@12"	#4@12"	#5@12"	#4@12"
≤6'-6"	1'-0"	1'-6"	1'-6"	1'-6"	#5@12"	#4@12"	#6@12"	#4@12"
≤8'-6"	1'-0"	2'-0"	2'-0"	1'-6"	#5@12"	#4@12"	#6@12"	#4@12"
≤10'-0"	1'-0"	2'-6"	2'-6"	1'-6"	#5@9"	#4@12"	#6@12"	#4@12"
≤15'-6"	1'-6"	3'-6"	2'-0"	1'-6"	#6@6"	#4@12"	#6@9"	#4@12"

TYPICAL RETAINING WALL DETAIL

1 TYPICAL DETAIL

SCALE: NTS



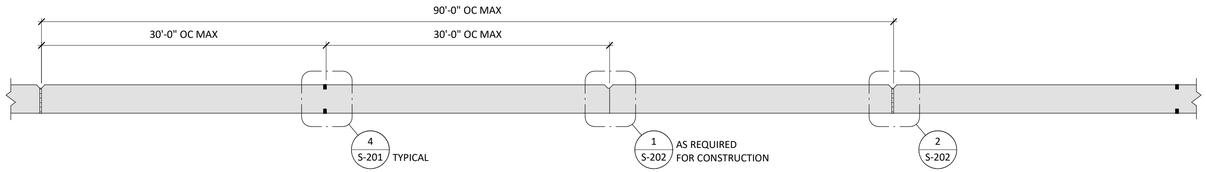
NOTES:

1. FOOTING SHALL BEAR ON STRATUM 3 LIMESTONE.
2. FOOTING EXCAVATION SHALL BE INSPECTED BY THE GEOTECHNICAL LABORATORY TO DETERMINE THAT THE PROPER BEARING STRATUM IS OBTAINED AND THAT EXCAVATIONS ARE PROPERLY CLEAN AND DRY BEFORE CONCRETE IS PLACED.
3. LOCATE CONTROL JOINTS AT 30'-0" OC MAX
4. LOCATE EXPANSION JOINTS AT 90'-0" OC MAX

RETAINING WALL SECTION

2 TYPICAL DETAIL

SCALE: NTS

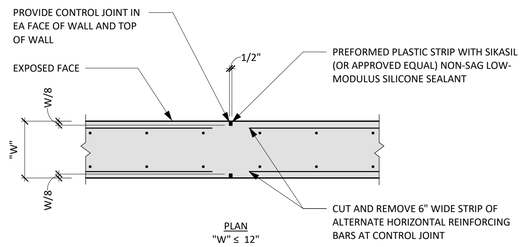


PLAN VIEW
WALLS ≤ 12" THICK

C-RET-TYP- RETAINING WALL JOINT DIAGRAM

3 TYPICAL DETAIL

SCALE: 3/4" = 1'-0"



PLAN
"W" ≤ 12"

RETAINING WALL CONTROL JOINT

4 TYPICAL DETAIL

SCALE: NTS

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1	10/04/24	REVISION 1	

0 1"

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TYPICAL CONCRETE DETAILS

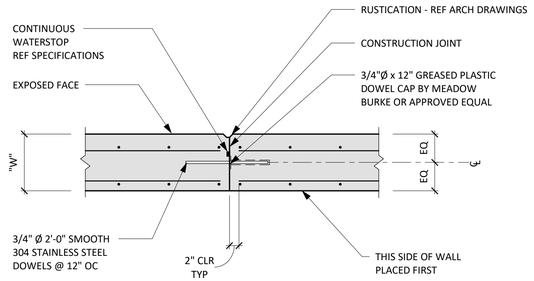
WESTERN HILLS ATHLETIC CLUB
4801 Rollingwood Drive
Austin, TX 78746

PLOTTED: 10/04/24
JOB NO 863-02:

S-201

7 OF 9

FILE: C:\Users\Hamzah.Khatkw\Documents\23257 – Western Hills AC – S22_HamzahKhatkw.rvt

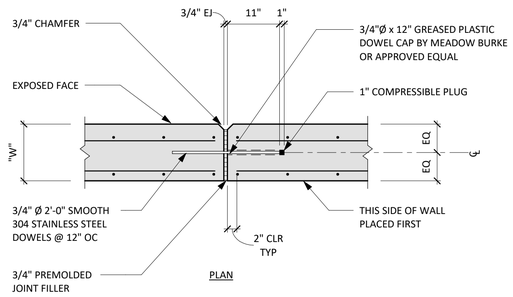


PLAN
"W" > 12"

RETAINING WALL CONSTRUCTION JOINT

1 TYPICAL DETAIL

SCALE: NTS

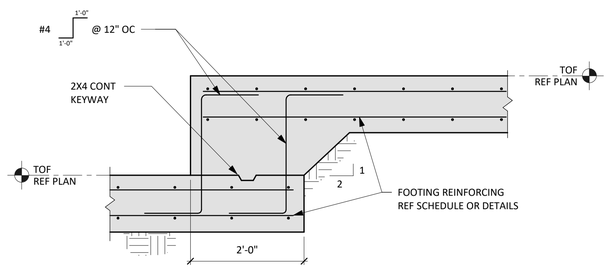


PLAN

RETAINING WALL EXPANSION JOINT

2 TYPICAL DETAIL

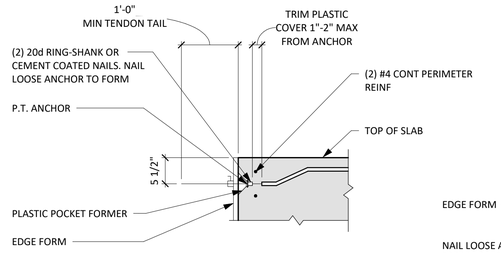
SCALE: NTS



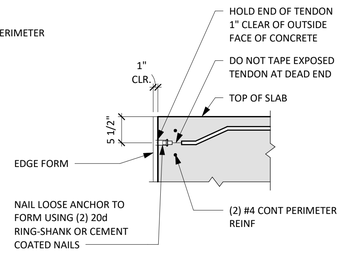
RETAINING WALL FOOTING STEP

3 TYPICAL DETAIL

SCALE: NTS



LIVE END

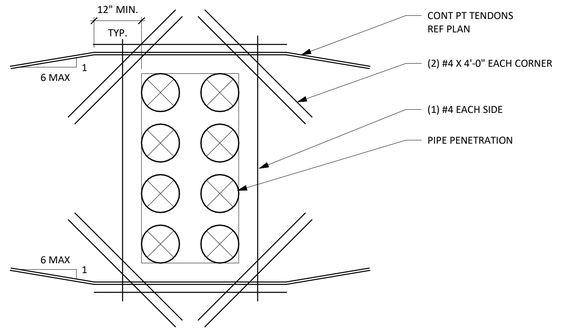


DEAD END

LIVE & DEAD ENDS

4 TYPICAL DETAIL

SCALE:NO SCALE



TENDON DEVIATION AT OPENING

5 TYPICAL DETAIL

SCALE:NO SCALE

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1	10/04/24	REVISION 1	

0 1"

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TYPICAL CONCRETE DETAILS

WESTERN HILLS ATHLETIC CLUB
4801 Rollingwood Drive
Austin, TX 78746

PLOTTED: 10/04/24
JOB NO 863-02:

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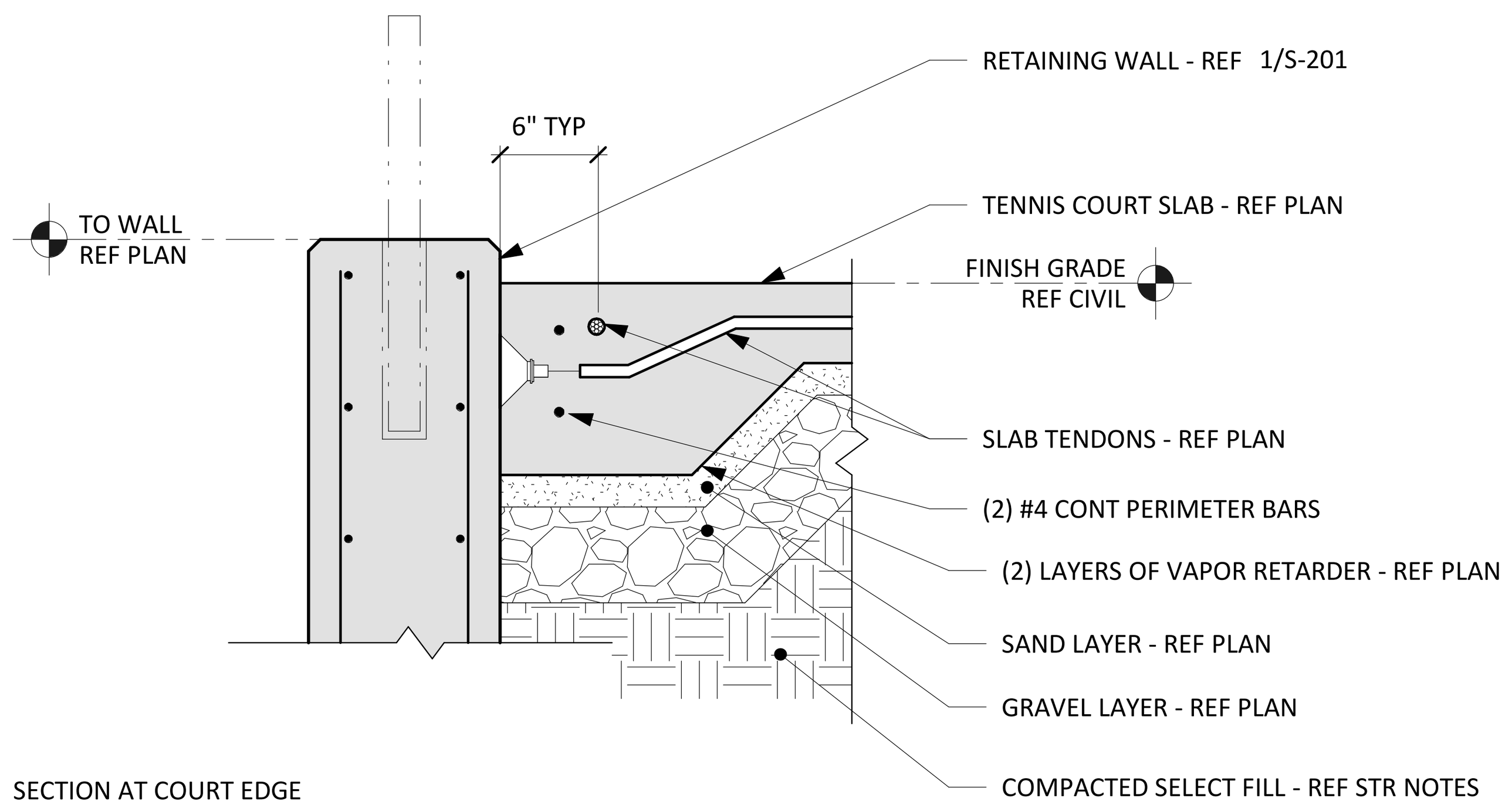
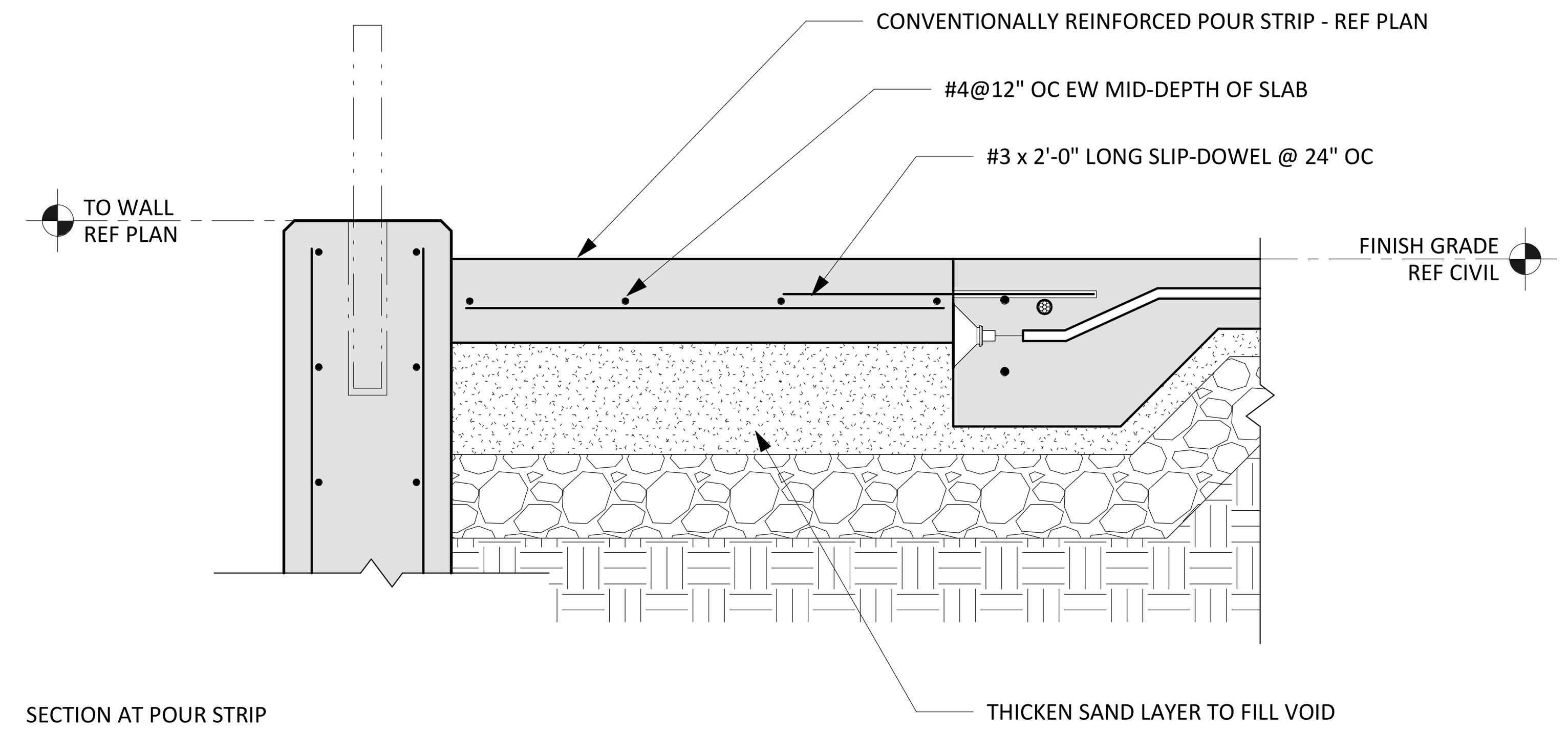


SECTION AT COURT EDGE

1 DETAIL

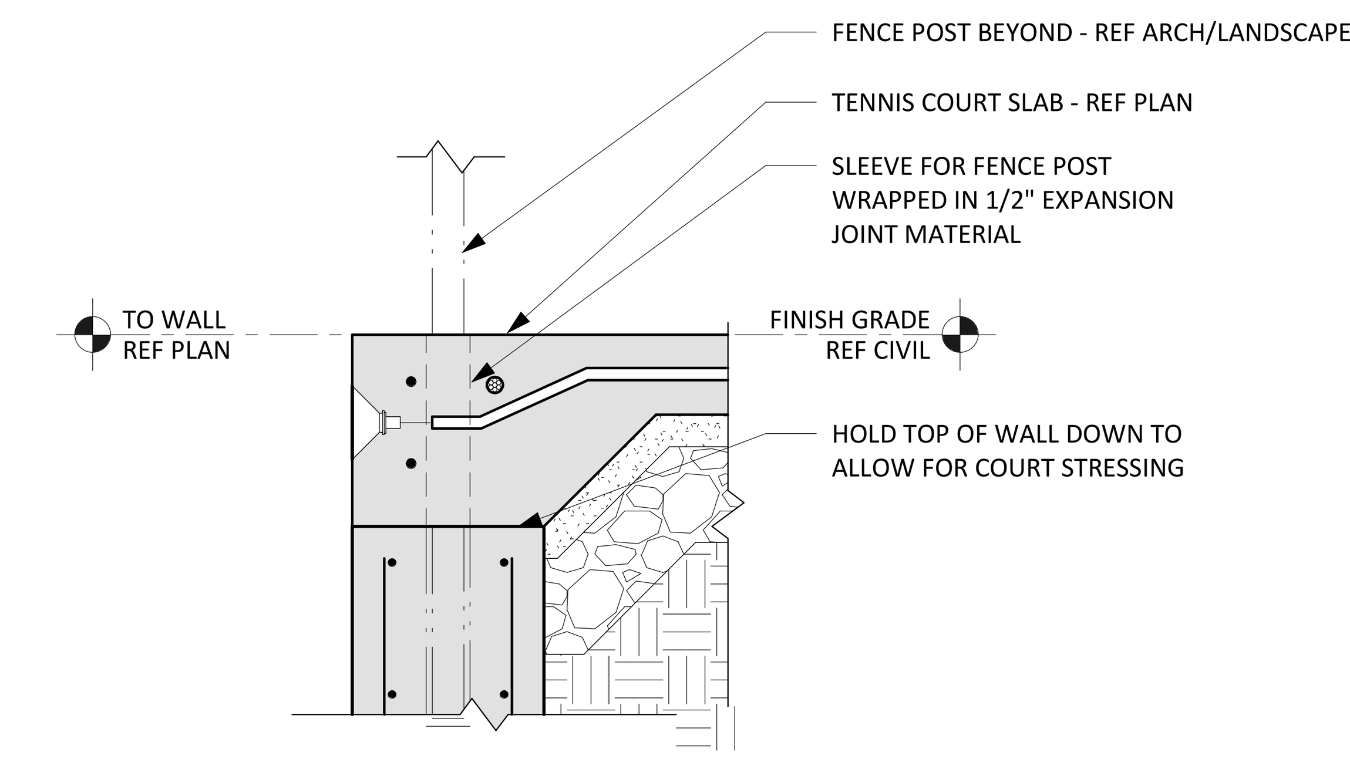
SCALE: 1" = 1'-0"



SECTION AT POUR STRIP

2 DETAIL

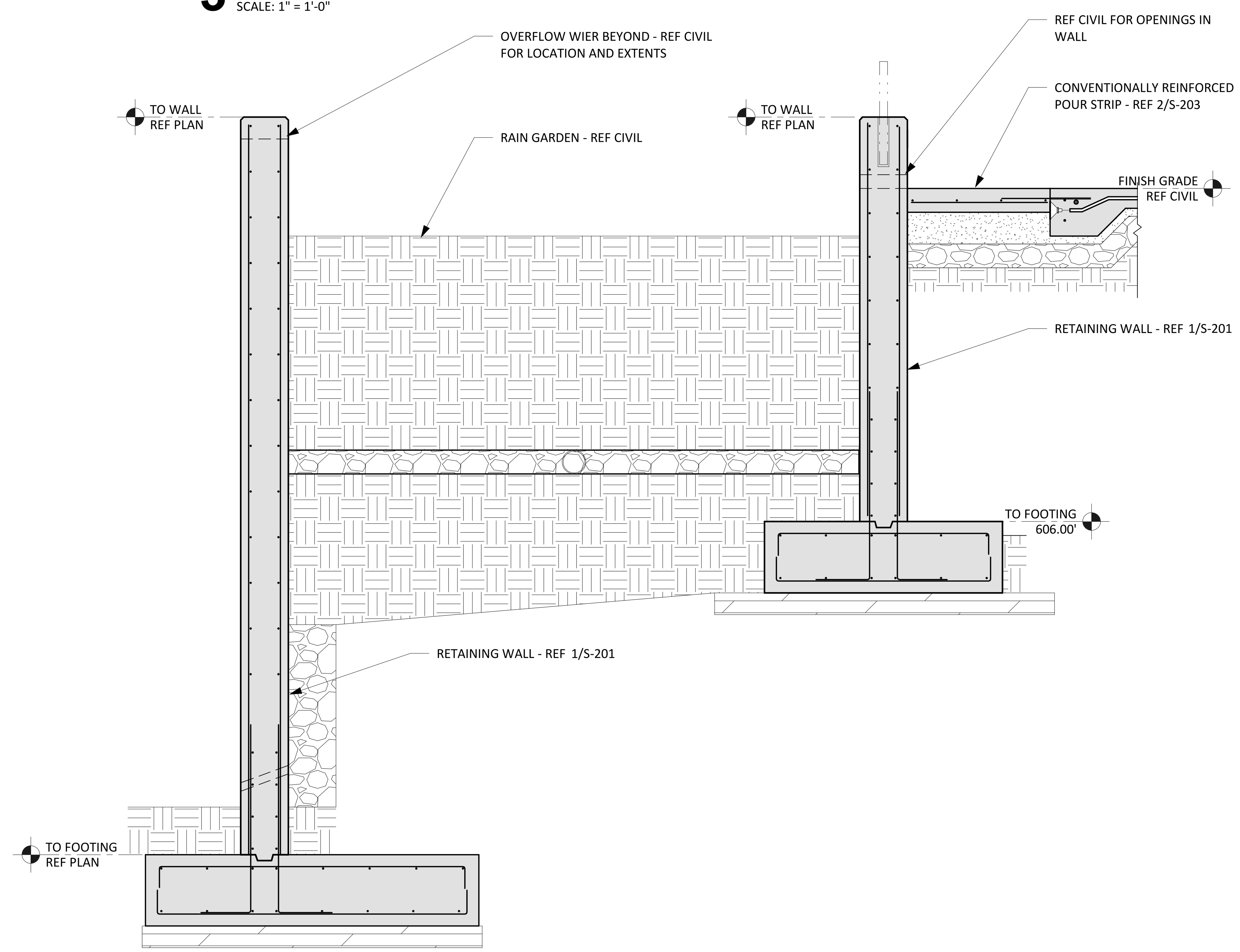
SCALE: 1" = 1'-0"

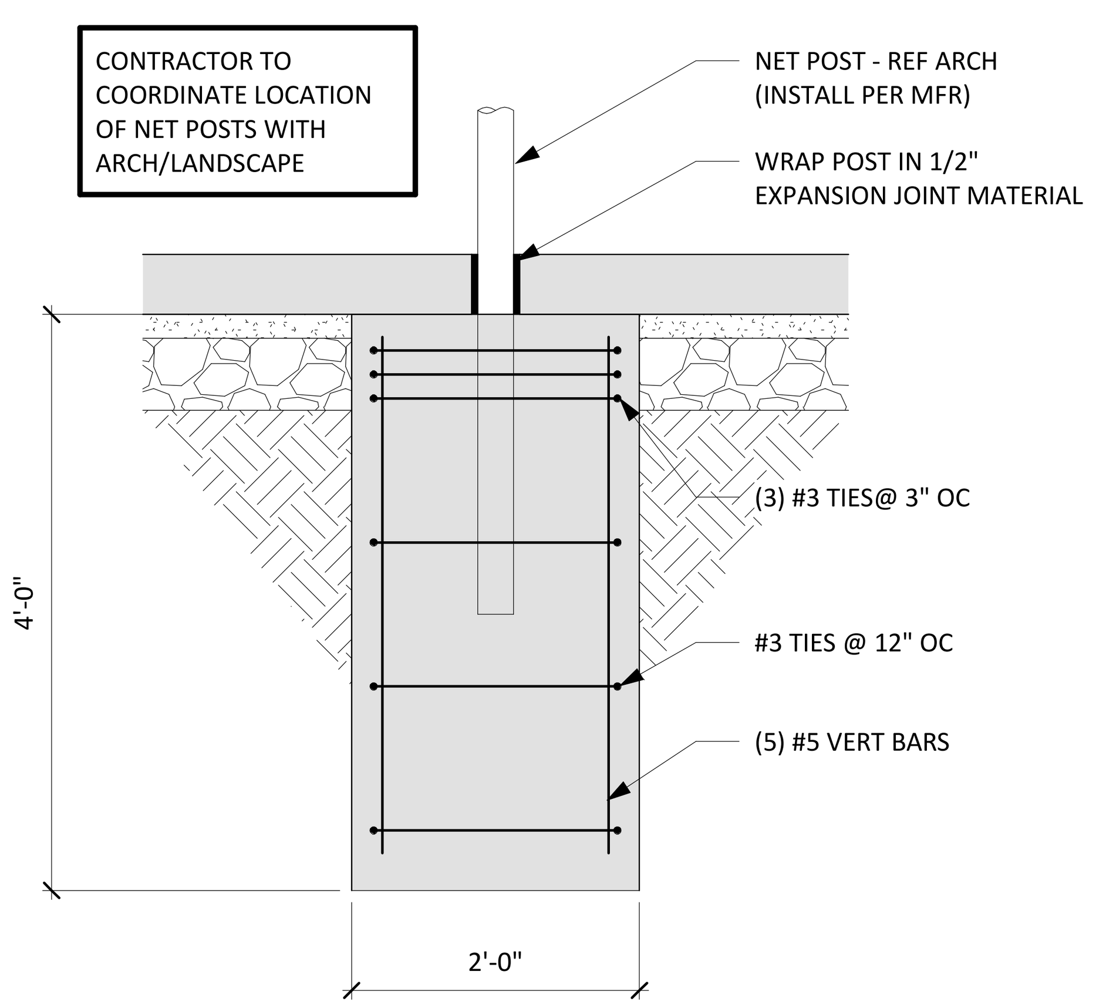


SECTION BETWEEN COURTS

3 DETAIL

SCALE: 1" = 1'-0"

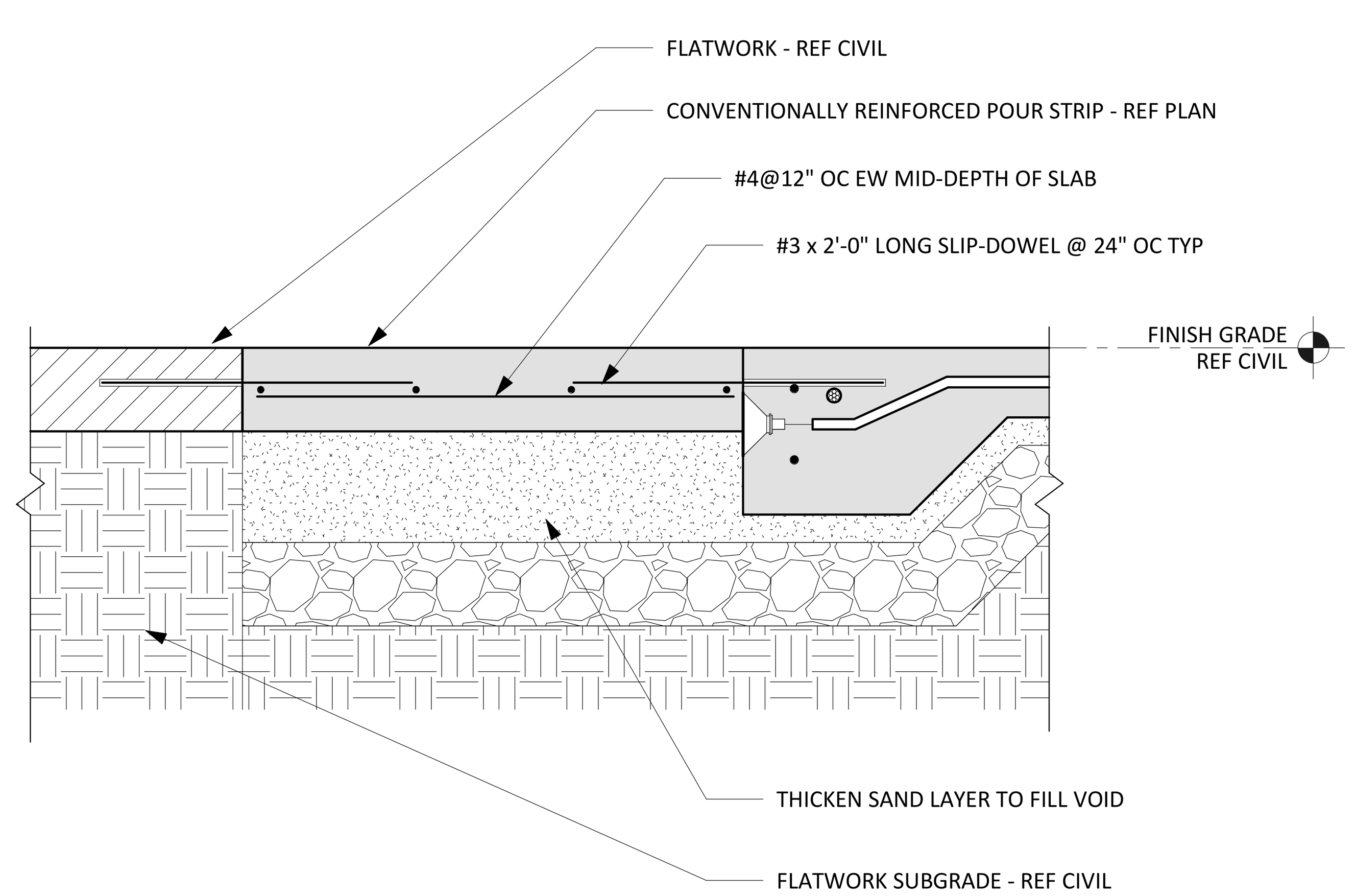




NET POST FOUNDATION

4 DETAIL

SCALE: 3/4" = 1'-0"



5 SECTION AT POUR STRIP WITH FLATWORK

SCALE: 1" = 1'-0"

1

6 SECTION AT RAIN GARDEN

SCALE: 1/2" = 1'-0"

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0 1"

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CONCRETE DETAILS

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4801 Rollingwood Drive
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PLOTTED: 10/04/24

JOB NO 863-02:

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