SITE WORK PLANS FOR

ROOMS TO GO

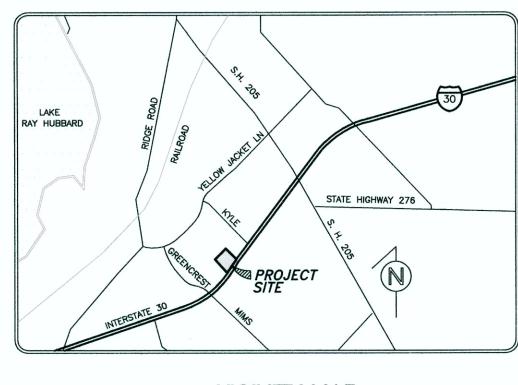
920 EAST INTERSTATE 30 N.E.Q. INTERSTATE HIGHWAY 30 & GREENCREST BOULEVARD THE CITY OF ROCKWALL ROCKWALL COUNTY, TEXAS

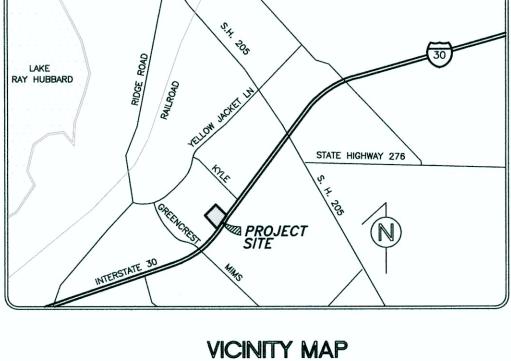
DEVELOPER: SEAMAN DEVELOPMENT CORPORATION 400 PERIMETER CENTER TERRACE ATLANTA, GEORGIA 30346 PHONE: (678) 338-4566 **CONTACT: JEFF FINKEL**

CIVIL ENGINEER: CATES-CLARK & ASSOCIATES, LLP 14800 QUORUM DRIVE, SUITE 200 DALLAS, TEXAS 75254 PHONE: (972) 385-2272 FAX: (972) 980-1627 **TEXAS REGISTERED ENGINEERING FIRM F-3751** CONTACT: DANIEL STEWART, PE EMAIL: DSTEWART@CATES-CLARK.COM

> PROJECT ARCHITECT: CASCO 10877 WATSON ROAD ST. LOUIS, MISSOURI 63127 PHONE: (314) 821-1100 FAX: (314) 821-4162 CONTACT: CHUCK CAESAR

LANDSCAPE ARCHITECT: SMR LANDSCAPE ARCHITECTS, INC. 1708 N. GRIFFIN STREET DALLAS, TEXAS 75202 PHONE: (214) 871-0083 FAX: (214) 871-0545 CONTACT: BRIAN ADAMS, ASLA





SHEET INDEX

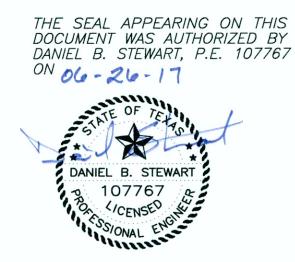
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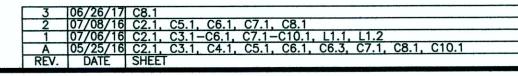
Cates-Clark & Associates, LLP Consulting Engineers

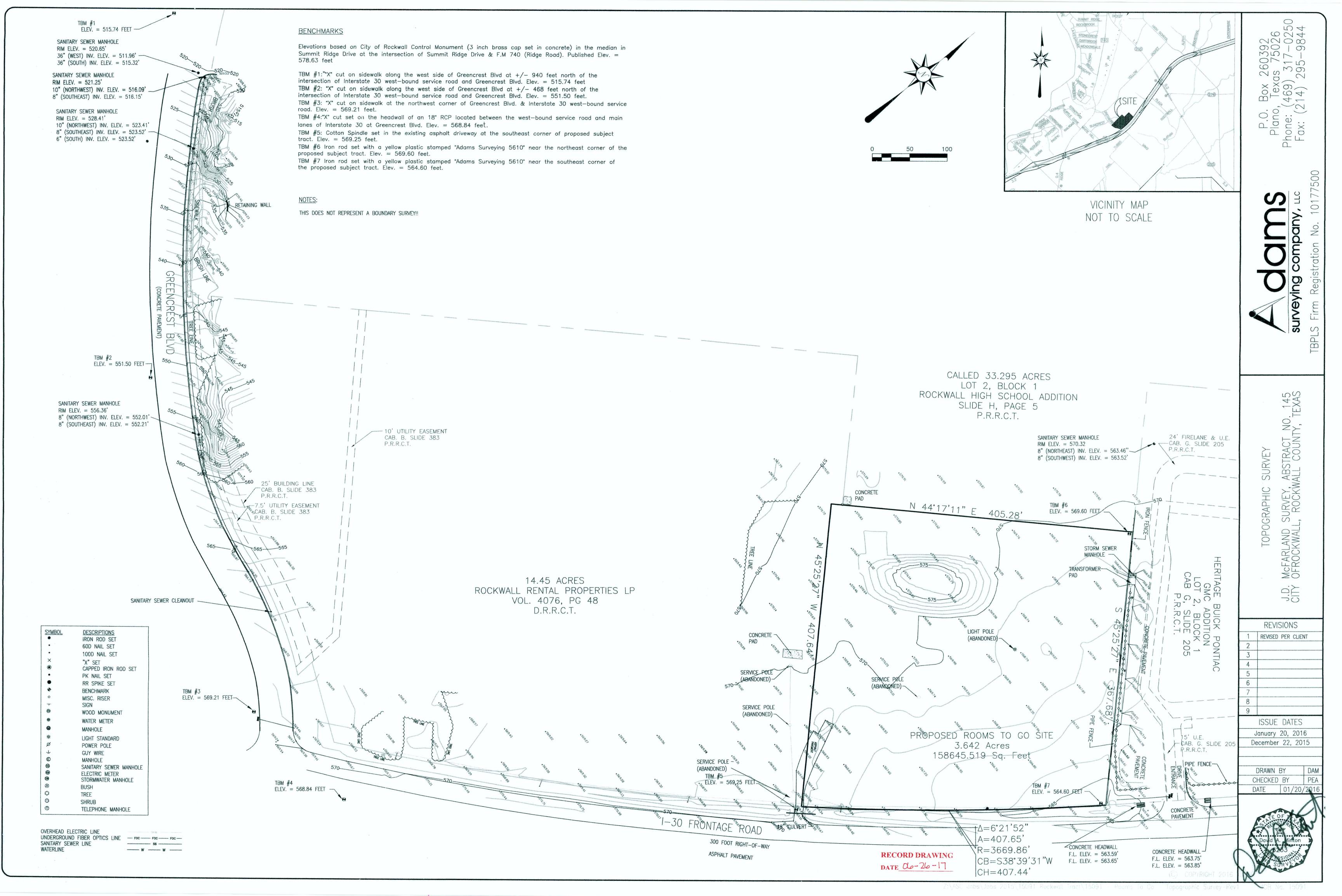
14800 Quorum Drive, Suite 200 Dallas, Texas 75254 Office: 972-385-2272 Fax: 972-980-1627 TBPE F-3751

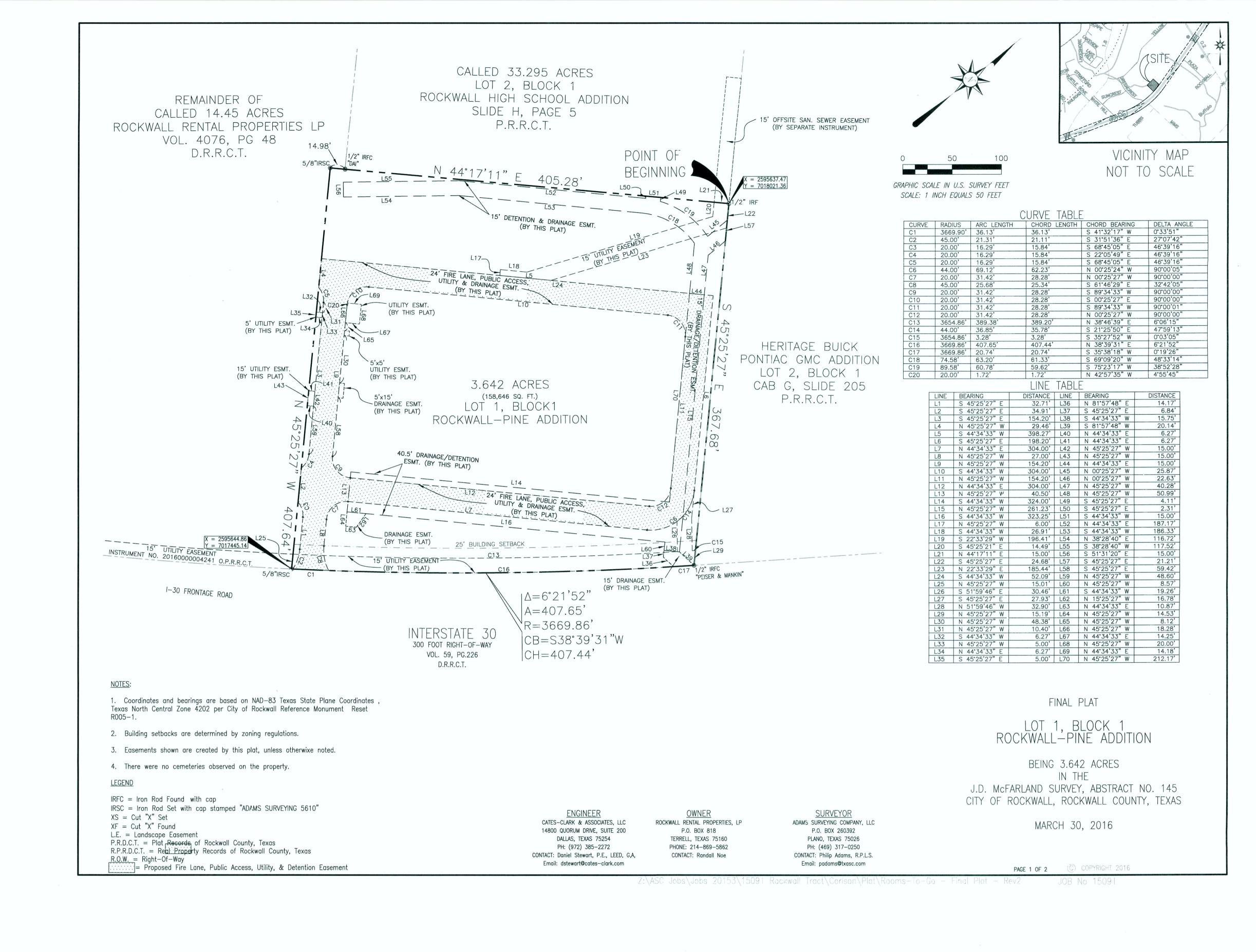


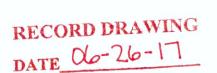
ES2

RECORD DRAWING DATE 06-26-17









OWNER'S CERTIFICATION

STATE OF TEXAS COUNTY OF ROCKWALL

WHEREAS ROCKWALL RENTAL PROPERTIES LP, BEING THE OWNER OF A TRACT OF land in the County of Rockwall, State of Texas, said tract being described as follows:

BEING a tract or parcel of land situated in the J.D. McFARLAND SURVEY, ABSTRACT NO. 145, City of Rockwall, Rockwall County, Texas and being a portion of a called 14.45 acre tract of land described in a deed to Rockwall Rental Properties LP as recorded in Volume 4076, Page 48 of the Deed Records of Rockwall County, Texas (D.R.R.C.T.) and being more particularly described as follows:

BEGINNING at a 1/2 inch iron rod found at the most easterly northeast corner of said Rockwall Rental tract, same being a southeast corner of Lot 2, Block 1 of Rockwall High School Addition, an addition to the City of Rockwall, as recorded in Slide H, Page 5 of the Plat Records of Rockwall County, Texas (P.R.R.C.T.) and also being in the southwest line of Lot 2, Block 1 of Heritage Buick—Pontiac—GMC Addition, an addition to the City of Rockwall, as described in a plat recorded in Cabinet G, Page 205 (P.R.R.C.T.);

THENCE S 45°25'27" E, coincident with the most easterly northeast line of said Rockwall Rental tract and the southwest line of said Heritage tract, a distance of 367.68 feet to a 1/2 inch iron rod found with a red plastic cap stamped "Peiser & Mankin" for the common southeast corner of said Rockwall Rental tract and the southwest corner of said Heritage tract, in a non-tangent curve to the right in the north Right-of-Way (ROW) line of Interstate 30 (300 foot ROW) as described in a deed to the State of Texas recorded in Volume 59, Page 226 D.R.R.C.T. with a radius of 3669.86 feet, a delta angle of 06°21′52", and a chord that bears S 38°39′31" W, a distance of 407.44 feet;

THENCE along the southeast line of said Rockwall Rental tract, same being the north ROW line of said Interstate 30 an arc length of 407.65 feet to a 5/8 inch iron rod set for corner with a pink plastic cap stamped "Adams Surveying Company LLC" therein;

THENCE N 45°25'27" W, leaving said ROW line, a distance of 407.64 feet to a 5/8 inch iron rod set for corner with a pink plastic cap stamped "Adams Surveying Company LLC";

THENCE N 44*17'11" E, passing a ½ inch iron rod found with a yellow plastic cap stamped "DAI" at a southwest corner of said Rockwall High School tract at a distance of 14.98 feet and continuing on coincident with a northwest line of said Rockwall Rental tract and a southeast line of said Rockwall High School tract for a total distance of 405.28 feet to the POINT OF BEGINNING and containing 3.642 acres of land, more or less.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

STATE OF TEXAS COUNTY OF ROCKWALL

We Rockwall Rental Properties LP, a Texas limited Liability Partnership, the undersigned owner(s) of the land shown on this plat, and designated herein as the ROCKWALL—PINE ADDITION subdivision to the City of Rockwall, Texas, and whose name is subscribed hereto, hereby dedicate to the use of the public forever all streets, alleys, parks, water courses, drains, easements and public places thereon shown on the purpose and consideration therein expressed. I (we) further certify that all other parties who have a mortgage or lien interest in the ROCKWALL—PINE ADDITION subdivision have been notified and signed this plat.

I (we) understand and do hereby reserve the easement strips shown on this plat for the purposes stated and for the mutual use and accommodation of all utilities desiring to use or using same. I (we) also understand the following;

- 1. No buildings shall be constructed or placed upon, over, or across the utility easements as described herein.
- 2. Any public utility shall have the right to remove and keep removed all or part of any buildings, fences, trees, shrubs, or other growths or improvements which in any way endanger or interfere with construction, maintenance or efficiency of their respective system on any of these easement strips; and any public utility shall at all times have the right of ingress or egress to, from and upon the said asement strips for purpose of construction, reconstruction, inspecting, patrolling, maintaining, and either adding to or removing all or part of their respective system without the necessity of, at any time, procuring the permission of anyone.
- 3. The City of Rockwall will not be responsible for any claims of any nature resulting from or occasioned by the establishment of grade of streets in the subdivision.
- 4. The developer and subdivision engineer shall bear total responsibility for storm drain improvements.
- 5. The developer shall be responsible for the necessary facilities to provide drainage patterns and drainage controls such that properties within the drainage area are not adversely affected by storm drainage from the development.
- 6. No house dwelling unit, or other structure shall be constructed on any lot in this addition by the owner or any other person until the developer and/or owner has complied with all requirements of the Subdivision Regulations of the City of Rockwall regarding improvements with respect to the entire block on the street or streets on which property abuts, including the actual installation of streets with therequired base and paving, curb and gutter, water and sewer, drainage structures, storm structures, storm sewers, and alleys, all according to the specifications of the City of Rockwall; or until an escrow deposit, sufficient to pay for the cost of such improvements, as determined by the city's engineer and/or city administrator, computed on a private commercial rate basis, has been made with the city secretary, accompanied by an agreement signed by the developer and/or owner, authorizing the city to make such improvements at prevailing private commercial rates, or have the same madeby a contractor and pay for the same out of the escrow deposit, should the developer and/or owner fail or refuse to install the required improvements within the time stated in such written agreement, but in no case shall the City be obligated to make such improvements itself. Such deposit may be used by the owner and/or developer as progresspayments as the work progresses in making such improvements by making certified requisitions to the city secretary, supported by evidence of work done; or Until the developer and/or owner files a corporate surety bond with the city secretary in a sum equal to the cost of such improvements for the designated area, guaranteeing the installation thereof within the time stated in the bond, which time shall be fixed by the city council of the City of Rockwall.
- 7. Property owner is responsible fpr all maintenance, repair, and/orreplacement of all detention/drainage systems.

	RECOMMENDED FOR FINAL APPROVAL		
Planning & Zoning Commission, Chairman	Date	-	
	<u>APPROVED</u>		
		cil of the City of Rockwall on theth day of, 2015. all, County, Texas, within one hundred eighty (180) days from said date of final	
WITNESS OUR HANDS, thisth day of, 2	016.		ENGINEER CATES-CLARK & ASSOCIATES, LLC 14800 QUORUM DRIVE, SUITE 200 DALLAS, TEXAS 75254 PH: (972) 385-2272
Mayor, City of Rockwall	City Secretary	City Engineer	CONTACT: Daniel Stewart, P.E., LEED, G,A, Email: dstewart@cates—clark.com

I (we) further acknowledge that the dedications and/or exaction's made herein are proportional to the impact of the Subdivision upon the public services required in order that the development will comport with the present and future growth needs of the City; I (we), my (our) successors and assigns hereby waive any claim, damage, or cause of action that I (we) may have as a result of the dedication of exactions

Property Owner Signature

STATE OF TEXAS

COUNTY OF ROCKWALL

Before me, the undersigned authority, on this day personally appeared Randall Noe], known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purpose and consideration therein stated.

Given upon my hand and seal of office this _____th day of _____, 2016.

Notary Public in and for the State of Texas My Commission Expires

Signature of Party with Mortgage or Lien Interest

STATE OF TEXAS

[IF APPLICABLE:]

COUNTY OF ROCKWALL

Before me, the undersigned authority, on this day personally appeared Randall Noe, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purpose and consideration therein stated.

Given upon my hand and seal of office this _____ day of _____, 2016.

Notary Public in and for the State of Texas My Commission Expires

GENERAL NOTES

1. It shall be the policy of the City of Rockwall to withhold issuing building permits until all streets, water, sewer and storm drainage systems have been accepted by the City. The approval of a plat by the City does not constitute any representation, assurance or guarantee that any building within such plat shall be approved, authorized or permit therefore issued, nor shall such approval constitute any representation, assurance or guarantee by the City of the adequacy and availability for water for personal use and fire protection within such plat, as required under Ordinance 83-54.

SURVEYOR'S CERTIFICATE

NOW, THEREFORE KNOW ALL MEN BY THESE PRESENTS:

THAT I, David A. Minton, do hereby certify that I prepared this plat from an actual and accurate survey of the land,

and that the corner monuments shown thereon wereproperly placed under my personal supervision.

Surveyor Signature RPLS No.

CATES-CLARK & ASSOCIATES, LLC ROCKWALL RENTAL PROPERTIES, LP ADAMS SURVEYING COMPANY, LLC

P.O. BOX 818

TERRELL, TEXAS 75160

PHONE: 214-869-5862

CONTACT: Randall Noe

Before me, the undersigned authority, on this day personally appeared David A. Minton, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purpose and consideration therein stated.

<u>SURVEYOR</u>

P.O. BOX 260392

PLANO, TEXAS 75026

PH: (469) 317-0250

CONTACT: Philip Adams, R.P.L.S.

Email: padams@txasc.com

Given upon my hand and seal of office this _____ day of _____, 2016.

Notary Public in and for the State of Texas My Commission Expires

FINAL PLAT

LOT1, BLOCK1 ROCKWALL—PINE ADDITION

BEING 3.642 ACRES IN THE J.D. McFARLAND SURVEY, ABSTRACT NO. 145 CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

MARCH 30, 2016

PAGE 2 OF 2 © COPYRIGHT 2016

Z:\ASC Jobs\Jobs 20153\15091 Rockwall Tract\Carlson\Plat\Rooms-To-Go - Final Plat - Rev 2 JOB No 15091

RECORD DRAWING DATE 06-26-17

- 2. EXAMINATION OF PLANS: PRIOR TO COMMENCING ANY CONSTRUCTION, THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS. FAILURE ON THE PART OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL STANDARDS AND SPECIFICATIONS PERTAINING TO THE WORK SHALL IN NO WAY RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PERFORMING THE WORK IN ACCORDANCE WITH ALL SUCH APPLICABLE STANDARDS AND SPECIFICATIONS.
- 3. EXAMINATION OF SITE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR INVESTIGATING AND SATISFYING HIMSELF AS TO THE CONDITIONS AFFECTING THE WORK, INCLUDING BUT NOT RESTRICTED TO THOSE BEARING UPON TRANSPORTATION, DISPOSAL, HANDLING AND STORAGE OF MATERIALS, AVAILABILITY OF LABOR, WATER, ELECTRIC POWER, ROADS AND UNCERTAINTIES OF WEATHER, OR SIMILAR PHYSICAL CONDITIONS AT THE SITE, CONDITIONS OF THE GROUND, THE CHARACTER OF EQUIPMENT AND FACILITIES NEEDED PRELIMINARY TO AND DURING THE PERFORMANCE OF THE WORK. FAILURE BY THE CONTRACTOR TO ACQUAINT HIMSELF WITH THE AVAILABLE INFORMATION WILL NOT RELIEVE HIM FROM RESPONSIBILITY FOR ESTIMATING THE DIFFICULTY OR COST OF SUCCESSFULLY PERFORMING THE WORK.
- 4. SUBSURFACE INVESTIGATION: SUBSURFACE EXPLORATION TO ASCERTAIN THE NATURE OF SOILS HAS BEEN PERFORMED BY THE GEOTECHNICAL ENGINEER OF RECORD ON THE PROJECT. THE SUBSURFACE INFORMATION WILL BE MADE AVAILABLE FOR THE CONTRACTOR'S USE. THE ENGINEER DISCLAIMS ANY RESPONSIBILITY FOR THE ACCURACY, TRUE LOCATION AND EXTENT OF THE SOILS INFORMATION PREPARED BY OTHERS.
- 5. TOPOGRAPHIC SURVEY: TOPOGRAPHIC SURVEY INFORMATION SHOWN ON THE PLANS IS PROVIDED FOR INFORMATIONAL PURPOSES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE INFORMATION SHOWN IS CORRECT, AND SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY ERRORS, DISCREPANCIES OR OMISSIONS TO THE SURVEY INFORMATION PROVIDED.
- 6. COMPLIANCE WITH LAWS: THE CONTRACTOR SHALL FULLY COMPLY WITH ALL LOCAL, STATE AND FEDERAL LAWS, INCLUDING ALL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS CONTRACT AND THE WORK TO BE DONE THEREUNDER, WHICH EXIST OR MAY BE ENACTED LATER BY GOVERNMENTAL BODIES HAVING JURISDICTION OR AUTHORITY FOR SUCH ENACTMENT. ALL WORK REQUIRED UNDER THIS CONTRACT SHALL COMPLY WITH ALL REQUIREMENTS OF LAW, REGULATION, PERMIT OR LICENSE. IF THE CONTRACTOR FINDS THAT THERE IS A VARIANCE, HE SHALL IMMEDIATELY REPORT THIS TO THE OWNER FOR RESOLUTION.
- 7. PUBLIC CONVENIENCE AND SAFETY: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. MATERIALS STORED ON THE WORK SITE SHALL BE PLACED, AND THE WORK SHALL AT ALL TIMES BE SO CONDUCTED, AS TO CAUSE NO GREATER OBSTRUCTION TO THE TRAVELING PUBLIC THAN IS CONSIDERED ACCEPTABLE BY THE GOVERNING AUTHORITIES AND THE OWNER AND NOT TO PREVENT FREE UNINTERRUPTED ACCESS TO ALL FIRE HYDRANTS, WATER VALVES, GAS VALVES, MANHOLES AND FIRE ALARM OR POLICE CALL BOXES IN THE VICINITY.
- 8. STORM WATER POLLUTION PREVENTION PLAN (SWPPP): THE CONTRACTOR SHALL COMPLY WITH THE CONDITIONS OF THE SWPPP WHILE CONDUCTING HIS ACTIVITIES ON THE PROJECT.
- 9. PERMITS AND LICENSES: THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND LICENSES NECESSARY FOR THE EXECUTION OF THE WORK AND SHALL FULLY COMPLY WITH ALL THEIR TERMS AND CONDITIONS. WHENEVER THE WORK UNDER THIS CONTRACT REQUIRES THE OBTAINING OF PERMITS FROM THE GOVERNING AUTHORITIES, THE CONTRACTOR SHALL FURNISH DUPLICATE COPIES OF SUCH PERMITS TO THE OWNER BEFORE THE WORK COVERED THEREBY IS STARTED. NO WORK WILL BE ALLOWED TO PROCEED BEFORE SUCH PERMITS HAVE BEEN OBTAINED.
- 10. APPROVED PLANS: THE CONTRACTOR SHALL HAVE AT LEAST ONE ORIGINAL SET OF APPROVED PLANS ON-SITE AT ALL TIMES. NO COPIES OF CITY APPROVED (STAMPED) SETS ARE ALLOWED ON-SITE.
- 11. BONDS: PERFORMANCE, PAYMENT AND MAINTENANCE BONDS MAY BE REQUIRED FROM THE CONTRACTOR FOR "PUBLIC" IMPROVEMENTS. IF REQUIRED, THE CONTRACTOR SHALL PROVIDE THE BONDS IN THE FORM AND IN THE AMOUNTS AS REQUIRED BY THE GOVERNING AUTHORITIES. COSTS ASSOCIATED WITH PROVIDING THE BONDS SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- 12. TESTING: THE TESTING AND CONTROL OF ALL MATERIALS USED IN THE WORK SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY, EMPLOYED AND PAID DIRECTLY BY THE OWNER. IN THE EVENT THE RESULTS OF INITIAL TESTING DO NOT COMPLY WITH THE PLANS AND SPECIFICATIONS, SUBSEQUENT TESTS NECESSARY TO DETERMINE THE ACCEPTABILITY OF MATERIALS OR CONSTRUCTION SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 13. INSPECTION: THE GOVERNING AUTHORITIES AND/OR THE OWNER WILL PROVIDE INSPECTION OF THE PROPOSED CONSTRUCTION. THE OWNER WILL PAY THE COSTS FOR INSPECTION SERVICES. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE WELL IN ADVANCE OF PENDING CONSTRUCTION ACTIVITIES TO THE GOVERNING AUTHORITIES AND/OR OWNER FOR SCHEDULING OF INSPECTION SERVICES.
- 14. SHOP DRAWINGS: THE CONTRACTOR SHALL HAVE PREPARED, REVIEW, AND SUBMIT ALL SHOP DRAWINGS, PRODUCT DATA AND SAMPLES REQUIRED BY THE GOVERNING AUTHORITIES AND THE PROJECT CONTRACT DOCUMENTS IN ACCORDANCE WITH ITEM 1.28 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, NORTH CENTRAL TEXAS NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS.
- 15. SURVEYING: ALL SURVEYING REQUIRED FOR CONSTRUCTION STAKING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE OWNER SHALL PROVIDE THE PROPERTY CORNERS AND TWO BENCHMARKS FOR USE AS HORIZONTAL AND VERTICAL DATUM. THE CONTRACTOR SHALL EMPLOY A REGISTERED PROFESSIONAL LAND SURVEYOR TO PERFORM ALL ADDITIONAL SURVEY, LAYOUT AND MEASUREMENT WORK NECESSARY FOR THE COMPLETION OF THE PROJECT. THE COSTS ASSOCIATED WITH THE CONSTRUCTION STAKING SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- 16. PROTECTION OF PROPERTY CORNERS AND BENCHMARKS: THE CONTRACTOR SHALL PROTECT ALL PROPERTY CORNER MARKERS AND BENCHMARKS. WHEN ANY SUCH MARKERS OR MONUMENTS ARE IN DANGER OF BEING DISTURBED, THEY SHALL BE PROPERLY REFERENCED AND IF DISTURBED SHALL BE RESET BY A REGISTERED PUBLIC SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
- 17. EXISTING STRUCTURES: THE PLANS SHOW THE LOCATION OF ALL KNOWN SURFACE AND SUBSURFACE STRUCTURES, HOWEVER, THE DEVELOPER, ENGINEER AND CITY OF ROCKWALL ASSUME NO RESPONSIBILITY FOR FAILURE TO SHOW ANY OR ALL OF THESE STRUCTURES ON THE PLANS, OR TO SHOW THEM IN THEIR EXACT LOCATION. SUCH FAILURE SHALL NOT BE CONSIDERED SUFFICIENT BASIS FOR CLAIMS FOR ADDITIONAL COMPENSATION FOR EXTRA WORK OR FOR INCREASING THE PAY QUANTITIES IN ANY MANNER WHATSOEVER, UNLESS THE OBSTRUCTION ENCOUNTERED IS SUCH AS TO REQUIRE CHANGES IN THE LINES OR GRADES, OR REQUIRE THE CONSTRUCTION OF SPECIAL WORK, FOR WHICH PROVISIONS ARE NOT MADE IN THE
- 18. PROTECTION OF EXISTING UTILITIES: AS REQUIRED BY "THE TEXAS UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT". TEXAS ONE CALL SYSTEM MUST BE CONTACTED (800-245-4545) AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION OPERATIONS BEING PERFORMED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT TEXAS ONE CALL SYSTEM. THE LOCATION OF EXISTING UTILITIES SHOWN ON THE PLANS ARE BASED ON THE BEST RECORDS AND/OR FIELD INFORMATION AVAILABLE AND ARE NOT GUARANTEED BY THE OWNER OR ENGINEER TO BE ACCURATE AS TO THE LOCATION AND DEPTH. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF ADJACENT AND/OR CONFLICTING UTILITIES SUFFICIENTLY IN ADVANCE OF HIS ACTIVITIES IN ORDER THAT HE MAY NEGOTIATE SUCH LOCAL ADJUSTMENTS AS NECESSARY IN THE CONSTRUCTION PROCESS TO PROVIDE ADEQUATE CLEARANCES. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL EXISTING UTILITIES, SERVICES AND STRUCTURES ENCOUNTERED, WHETHER OR NOT THEY ARE ON THE PLANS. ANY DAMAGE TO UTILITIES RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED AT HIS EXPENSE. TO AVOID UNNECESSARY INTERFERENCES OR DELAYS, THE CONTRACTOR SHALL COORDINATE ALL UTILITY REMOVALS, REPLACEMENTS AND CONSTRUCTION WITH THE APPROPRIATE GOVERNING AUTHORITIES. THE OWNER WILL NOT BE LIABLE FOR DAMAGES DUE TO DELAY BECAUSE OF THE ABOVE.
- 19. DAMAGE TO EXISTING FACILITIES: ALL EXISTING UTILITIES, PAVEMENT, SIDEWALKS, WALLS, FENCES, ETC. DAMAGED DURING CONSTRUCTION ACTIVITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE TO A CONDITION AS GOOD AS OR BETTER THAN THE CONDITIONS PRIOR TO STARTING THE WORK.
- 20. FIRE AND LIFE SAFETY SYSTEMS: THE CONTRACTOR SHALL NOT REMOVE, DISABLE OR DISRUPT EXISTING FIRE OR LIFE SAFETY SYSTEMS WITHOUT RECEIVING PRIOR WRITTEN PERMISSION FROM THE GOVERNING AUTHORITY.
- 21. TRENCH SAFETY: THE CONTRACTOR IS RESPONSIBLE FOR HAVING A TRENCH SAFETY PLAN PREPARED IN ACCORDANCE WITH OSHA REQUIREMENTS BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS FOR THE IMPLEMENTATION OF TRENCH SAFETY CONTROL MEASURES THAT WILL BE IN EFFECT DURING THE CONSTRUCTION OF THE PROJECT. THE COSTS FOR PREPARATION OF THE TRENCH SAFETY PLAN SHALL BE INCLUDED IN THE CONTRACT AMOUNT.

- 22. TRAFFIC CONTROL: IF REQUIRED, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DEVELOP AND SUBMIT FOR APPROVAL BY THE GOVERNING AUTHORITIES, A TRAFFIC CONTROL PLAN, PREPARED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS, OUTLINING TRAFFIC MANAGEMENT PROCEDURES TO BE PROVIDED DURING CONSTRUCTION. THE COSTS ASSOCIATED WITH THE PREPARATION AND IMPLEMENTATION OF THE TRAFFIC CONTROL PLAN SHALL BE INCLUDED IN THE CONTRACT AMOUNT. TRAFFIC CONTROL MEASURES SHALL BE PROVIDED IN ACCORDANCE WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:
- a. CONSTRUCTION OF SIGNING AND BARRICADES SHALL CONFORM WITH THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".
- b. THE CONTRACTOR SHALL BE REQUIRED TO FURNISH BARRICADES, FLARES, FLAGMEN, ETC., FOR THE PROTECTION OF THE PUBLIC, EMPLOYEES AND THE WORK.
- c. THE CONTRACTOR SHALL PERFORM HIS WORK IN SUCH A MANNER AS TO CREATE A MINIMUM OF INTERRUPTION TO TRAFFIC ALONG ADJACENT ROADWAYS. THE CONTRACTOR SHALL MAINTAIN TWO WAY TRAFFIC ON ALL ROADWAYS AT ALL TIMES THROUGHOUT CONSTRUCTION UNLESS THE GOVERNING
- d. ALL SIGNAGE, MARKINGS, LIGHTING, BARRICADES, FLAGMEN AND OTHER DEVICES AND PERSONNEL REQUIRED FOR TRAFFIC CONTROL DURING CONSTRUCTION OF THE PROJECT WILL BE INCLUDED IN THE CONTRACT AMOUNT.
- e. ALL TRAFFIC CONTROL DEVICES USED DURING NIGHTTIME SHALL BE REFLECTORIZED, ILLUMINATED FROM WITHIN OR EXTERNALLY ILLUMINATED.

AUTHORITIES GRANT WRITTEN PERMISSION.

- f. THE CONTRACTOR SHALL NOT REMOVE ANY REGULATORY SIGN, INSTRUCTIONAL SIGN, WARNING SIGN, STREET NAME SIGN OR ANY SIGNAL, WHICH CURRENTLY EXISTS, WITHOUT THE CONSENT OF THE GOVERNING AUTHORITIES.
- g. THE CONTRACTOR SHALL MAINTAIN AND REPLACE WHERE NECESSARY AT THE END OF CONSTRUCTION AND RESTORE UNIMPROVED PAVEMENT AND OTHER DISTURBED AREAS TO THEIR ORIGINAL PLACE.
- h. THE CONTRACTOR SHALL REMOVE ALL TRAFFIC CONTROL MEASURES AT THE END OF CONSTRUCTION AND RESTORE UNIMPROVED PAVEMENT AND OTHER DISTURBED AREAS TO THEIR ORIGINAL CONDITION.
- 23. ACCESS TO ADJACENT PROPERTIES: ACCESS TO ADJACENT PROPERTIES SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE DIRECTED BY THE GOVERNING AUTHORITIES AND/OR OWNER.
- 24. ACCESS ROUTES, STAGING AREAS AND STORAGE AREAS: ALL PRIVATE HAUL ROADS AND ACCESS ROUTES AND THE LOCATION OF ALL STAGING AREAS AND STORAGE AREAS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND REPAIRING ALL ROADS AND OTHER FACILITIES USED DURING CONSTRUCTION. UPON COMPLETION OF THE PROJECT, ALL HAUL ROADS, ACCESS ROADS, STAGING AREAS AND STORAGE AREAS SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT AT THE TIME THE CONTRACTOR COMMENCES WORK ON THE PROJECT.
- 25. PARKING OF CONSTRUCTION EQUIPMENT: AT NIGHT AND DURING ALL OTHER PERIODS OF TIME WHEN EQUIPMENT IS NOT BEING ACTIVELY USED FOR THE CONSTRUCTION WORK, THE CONTRACTOR SHALL PARK THE EQUIPMENT AT LOCATIONS, WHICH ARE APPROVED BY THE OWNER. DURING THE CONSTRUCTION OF THE PROJECT, THE CONTRACTOR SHALL COMPLY WITH THE PRESENT ZONING REQUIREMENTS OF THE GOVERNING AUTHORITIES IN THE USE OF VACANT PROPERTY FOR STORAGE PURPOSES. THE CONTRACTOR SHALL ALSO PROVIDE ADEQUATE BARRICADES, MARKERS AND LIGHTS TO PROTECT THE OWNER, THE GOVERNING AUTHORITIES, THE PUBLIC AND THE OTHER WORK. ALL BARRICADES, LIGHTS, AND MARKERS MUST MEET THE REQUIREMENTS OF THE GOVERNING AUTHORITIES' REGULATIONS.
- **26. WATER FOR CONSTRUCTION:** THE CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS FOR PURCHASING WATER FROM THE GOVERNING AUTHORITY FOR HIS USE ON THE PROJECT SITE. COSTS ASSOCIATED WITH THIS SERVICE SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- 27. TEMPORARY ELECTRIC AND COMMUNICATIONS FOR CONSTRUCTION: THE CONTRACTOR SHALL MAKE THE NECESSARY ARRANGEMENTS FOR INSTALLATION AND PURCHASING OF TEMPORARY ELECTRIC AND COMMUNICATIONS SERVICES FROM THE GOVERNING AUTHORITIES FOR HIS USE ON THE PROJECT SITE. COSTS ASSOCIATED WITH PURCHASING THESE SERVICES SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- 28. FENCES: ALL FENCES ENCOUNTERED AND REMOVED DURING CONSTRUCTION, EXCEPT THOSE DESIGNATED TO BE REMOVED OR RELOCATED, SHALL BE RESTORED TO THE ORIGINAL OR BETTER THAN CONDITION UPON COMPLETION OF THE PROJECT. WHERE WIRE FENCING, EITHER WIRE MESH OR BARBED WIRE, IS NOT TO BE CROSSED, THE CONTRACTOR SHALL SET CROSS-BRACED POSTS ON EITHER SIDE OF THE CROSSING. TEMPORARY FENCING SHALL BE ERECTED IN PLACE OF THE FENCING REMOVED WHENEVER THE WORK IS NOT IN PROGRESS AND WHEN THE SITE IS VACATED OVERNIGHT AND/OR AT ALL TIMES TO PREVENT PERSONS AND/OR LIVESTOCK FROM ENTERING THE CONSTRUCTION AREA. THE COST OF FENCE REMOVAL, TEMPORARY CLOSURES AND REPLACEMENT SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- 29. COORDINATION WITH OTHERS: IN THE EVENT THAT OTHER CONTRACTORS ARE DOING WORK IN THE SAME AREA SIMULTANEOUSLY WITH THE PROJECT, THE CONTRACTOR SHALL COORDINATE HIS PROPOSED CONSTRUCTION WITH THAT OF THE OTHER CONTRACTORS.
- 30. CONDITION OF SITE DURING CONSTRUCTION: THE CONTRACTOR SHALL KEEP THE SITE OF THE WORK AND ADJACENT PREMISES AS FREE FROM MATERIAL, DEBRIS AND RUBBISH AS IS PRACTICABLE. THE CONTRACTOR SHALL REMOVE MATERIAL, DEBRIS AND RUBBISH FROM ANY PORTION OF THE SITE IF, IN THE OPINION OF THE OWNER, SUCH MATERIAL, DEBRIS OR RUBBISH CONSTITUTES A NUISANCE OR IS OBJECTIONABLE.
- 31. EXISTING ROADWAYS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE CLEANLINESS OF EXISTING PAVED ROADS. COSTS ASSOCIATED WITH MAINTAINING THE CLEANLINESS OF EXISTING ROADS SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- 32. DUST CONTROL: THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO CONTROL DUST ON THE PROJECT SITE BY SPRINKLING OF WATER, OR ANY OTHER METHODS APPROVED BY THE GOVERNING AUTHORITIES. COSTS ASSOCIATED WITH DUST CONTROL SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- 33. CLEAN UP FOR FINAL ACCEPTANCE: THE CONTRACTOR SHALL MAKE A FINAL CLEAN UP OF ALL PARTS OF THE WORK PRIOR TO ACCEPTANCE BY THE OWNER. THIS CLEAN UP SHALL INCLUDE REMOVAL OF ALL OBJECTIONABLE MATERIALS AND, IN GENERAL, PREPARING THE SITE OF THE WORK IN AN ORDERLY MANNER OF APPEARANCE.
- 34. REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK: ALL WORK, WHICH HAS BEEN REJECTED OR CONDEMNED, SHALL BE REPAIRED, OR IF IT CANNOT BE REPAIRED SATISFACTORILY, IT SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. DEFECTIVE MATERIALS SHALL BE IMMEDIATELY REMOVED FROM THE WORK SITE. WORK DONE BEYOND THE LINE OR NOT IN CONFORMITY WITH THE GRADES SHOWN ON THE DRAWINGS OR AS PROVIDED, WORK DONE WITHOUT REQUIRED INSPECTION, OR ANY EXTRA OR UNCLASSIFIED WORK DONE WITHOUT WRITTEN AUTHORITY AND PRIOR AGREEMENT IN WRITING AS TO PRICES, SHALL BE AT THE CONTRACTOR'S RISK, AND WILL BE CONSIDERED UNAUTHORIZED, AND AT THE OPTION OF THE OWNER MAY NOT BE MEASURED AND PAID FOR AND MAY BE ORDERED REMOVED AT THE CONTRACTOR'S EXPENSE. UPON FAILURE OF THE CONTRACTOR TO REPAIR SATISFACTORY OR TO REMOVE AND REPLACE, IF SO DIRECTED, REJECTED, UNAUTHORIZED OR CONDEMNED WORK OR MATERIALS IMMEDIATELY AFTER RECEIVING NOTICE FROM THE OWNER, THE OWNER WILL, AFTER GIVING WRITTEN NOTICE TO THE CONTRACTOR, HAVE THE AUTHORITY TO CAUSE DEFECTIVE WORK TO BE REMEDIED OR REMOVED AND REPLACED, OR TO CAUSE UNAUTHORIZED WORK TO BE REMOVED AND TO DEDUCT THE COST THEREOF ANY MONIES DUE OR TO BECOME DUE THE CONTRACTOR.
- 55. DISPOSITION AND DISPOSAL OF EXCESS AND UNSUITABLE MATERIALS: ALL MATERIALS TO BE REMOVED FROM THE SITE INCLUDING BUT NOT LIMITED TO EXCESS MATERIAL AND UNSUITABLE MATERIALS SUCH AS CONCRETE, ASPHALT, LARGE ROCKS, REFUSE, AND OTHER DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE PROJECT AND CITY OF ROCKWALL. CONTRACTOR SHALL ALSO COMPLY WITH ALL APPLICABLE LAWS GOVERNING SPILLAGE OF DEBRIS WHILE TRANSPORTING TO A DISPOSAL SITE. COSTS ASSOCIATED WITH THE DISPOSAL OF EXCESS AND UNSUITABLE MATERIALS SHALL BE INCLUDED IN THE CONTRACT AMOUNT.
- 36. RECORD DRAWINGS: THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF THE INSTALLATION OF ALL MATERIALS AND SYSTEMS COVERED BY THE PROJECT CONTRACT DOCUMENTS. THE COMPLETED SET OF "RECORD" DRAWINGS" MUST BE DELIVERED TO THE OWNER AND/OR ENGINEER BEFORE REQUESTING FINAL PAYMENT.

CONTRACTOR OF THE CONTRACTOR O	CVICTINO	DDODOCEO	CLITLIDE
DDADEDTY LIVE	EXISTING	PROPOSED	FUTURE
PROPERTY LINE	r		1
BUILDING	[2.2.2.2.2]		N/A
FINISH FLOOR ELEVATION	FF=650.00	FF= 650.00	
SPOT ELEVATION	×650.50	50.50	N/A
CURB			
EDGE OF ASPHALT PAVEMENT		N/A	N/A
RIDGE LINE	N/A	— —RL— —	N/A
SWALE OR VALLEY GUTTER	N/A		N/A
CONTOUR LINE	375 EX 21" SD—	21" SD—	/ -75_ FUT 21" SI
STORM DRAIN	EX SDMH	SDMH	_p Fl
STORM DRAIN MANHOLE (JUNCTION BOX)	<u>2777</u> EX CI	C/	
CURB INLET	EZZIEX RCI	RCI	
RECESSED CURB INLET			
GRATE INLET	⊠ ^{EX GI} EX 8" WTR_	□□ ^{GI} _ <u>8" WTR</u> _	FUT_8"_WI
WATER LINE	EX 6 WIR		
FIRE HYDRANT	-ф- ғн	● ^{FH}	() FI
WATER VALVE			N/A
WATER METER BOX	⊚ ^{wM}	⊗	N/A
CONTROL VALVE	©	N/A	N/A
BACKFLOW PREVENTOR	В	B	N/A
DETECTOR CHECK	[DC]	DC	N/A
SANITARY SEWER LINE	EX 8" SS ——	8" SS	FUT 8" SS
SANITARY SEWER MANHOLE	——© ^{SSMH}	SSMH	OFL
CLEANOUT	<u>CO</u>	<u>co</u>	
DOUBLE CLEANOUT	OCO	OCO	cc-F
LIGHT POLE	* "		N/A
POWER POLE	→ PP	● PP	N/A
DOWN GUY		N/A	N/A
SIGN	۰	•	N/A
ACCESSIBLE PARKING	Es.	ě.	N/A
VAN ACCESSIBLE PARKING	\bigcirc	\bigcirc	N/A
ACCESSIBLE ROUTE	N/A	• • • •	N/A
RETAINING WALL			N/A
WOOD FENCE			N/A
SCREEN WALL FENCE		-00-	N/A
CHAIN LINK FENCE			N/A
WIRE FENCE		xx	N/A
TREE	(•)	N/A	N/A
TREE TO BE REMOVED	N/A		N/A
OVERHEAD LINE	ОНЬ	N/A	N/A
OVERHEAD ELECTRIC LINE	ОНЕ	OHE	N/A
OVERHEAD TELEPHONE LINE	ОНТ	ОНТ	N/A
UNDERGROUND ELECTRIC LINE	UGE	UGE	N/A
UNDERGROUND TELEPHONE LINE	UGT	UGT	N/A
UNDERGROUND CABLE LINE	CATV	сату	N/A
ELECTRIC METER	EM	EM	N/A
ELECTRIC TRANSFORMER	TRANSFORMER	Ŧ	N/A
ELECTRIC SWITCHGEAR	SWITCHGEAR	S	N/A
GAS METER	GM	GM	N/A
GAS LINE	GAS	GAS	N/A
BOLLARD	•		N/A

ON CENTER EACH WAY AREA DRAIN OVERHEAD ELECTRIC **APPROXIMATELY** GRATE INLET GAS MARKER **ASPH ASPHALT** REINFORCED CONCRETE BOX BACK OF CURB HACKBERRY TREE HIGH DENSITY POLYETHYLENE PIPE RECESSED CURB INLET BACK TO BACK OF CURB REINFORCED CONCRETE PIPE BARRIER FREE RAMP HEADWALI RCCP REINFORCED CONCRETE CYLINDRICAL PIPE HOT MIX ASPHALTIC CONCRETE BENCHMARK HORIZ HORIZONTAL REINF REINFORCED BOTTOM OF WALL RIDGE LINE HEATING, VENTILATION AND AIR CONDITIONING RED OAK TREE CFS CUBIC FEET PER SECOND IRRIGATION RIGHT OF WAY CORRUGATED METAL PIPE JUNCTION BOX SEPARATE INSTRUMENT CLEANOUT JOINT SQUARE FEET CONCRETE LINEAL FEET STORM DRAIN CONST CONSTRUCT LIVE OAK TREE STORM DRAIN MANHOLE LOW POINT SOLIARE CRAPE MYRTLE TREE SANITARY SEWER COMMUNICATIONS PEDESTAL COMMUNICATIONS VAULT NOT APPLICABLE SANITARY SEWER EASEMENT NATURAL GROUND (EXISTING) STATION DOUBLE CHECK DETECTOR CHECK POINT OF CURVATURE SQUARE YARD DOUBLE CLEANOUT TOP OF CURB POINT OF COMPOUND CURVATURE DECK DRAIN TRENCH DRAIN DRAINAGE EASEMENT POINT OF INTERSECTION TELEPHONE MANHOLE DROP INLET POST INDICATOR VALVE PROPERTY LINE TOP OF BANK POWER POLE TOF OF SLOPE DUCTILE IRON PIPE DOMESTIC WATER POINT OF REVERSE CURVATURE TOP OF PAVEMENT TRAFFIC SIGNAL CABINET PROPOSED ELECTRIC BOX PROPOSED BY OTHERS TRAFFIC SIGNAL POLE EXPANSION JOINT TRAFFIC SIGNAL VAULT POINT OF TANGENCY FI EVATION PVC PVMT TOP OF WALL FLECTRIC MANHOLE POLYVINYL CHLORIDE PIPE PAVEMENT EDGE OF PAVEMENT UTILITY EASEMENT EASEMENT UNDERGROUND ELECTRIC VITRIFIED CLAY PIPE FACE OF CURB FACE TO FACE OF CURB WATER FASEMENT WATER METER FINISHED FLOOR ELEVATION WATER MANHOLE FIRE HYDRANT FORCE MAIN WATER VALVE FIBER OPTICS

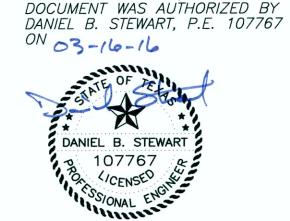
FINISHED PAD

FLOW LINE

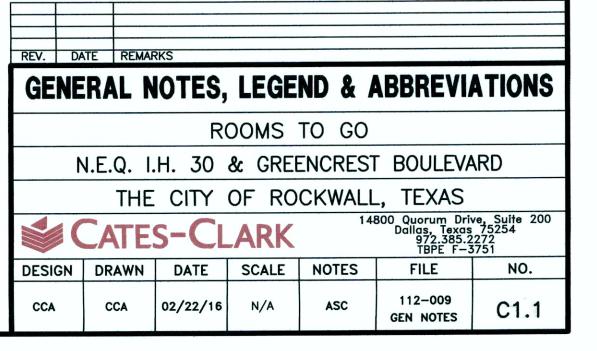
FEET PER SECOND

ABBREVIATIONS

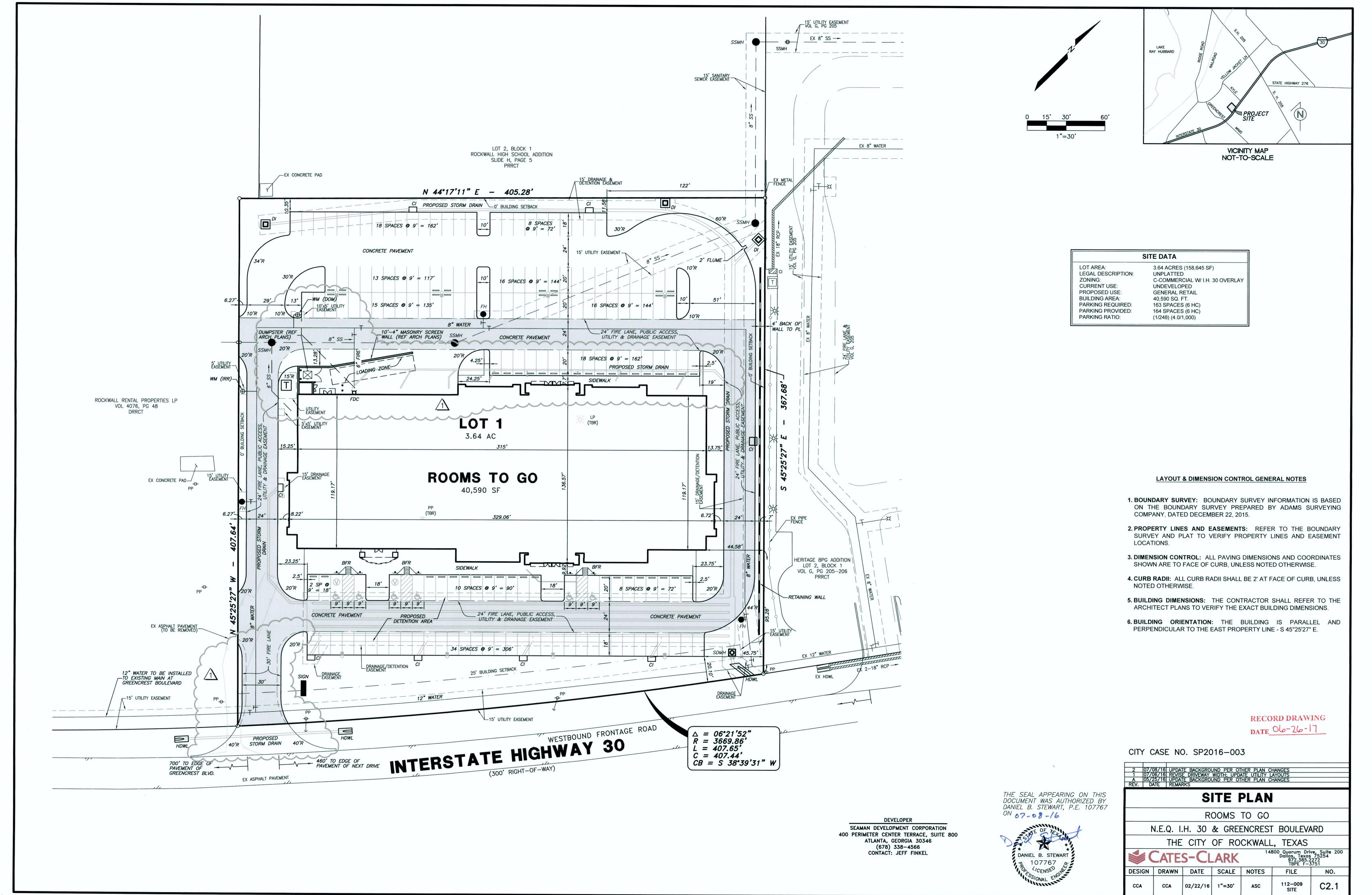
RECORD DRAWING
DATE 06-26-17

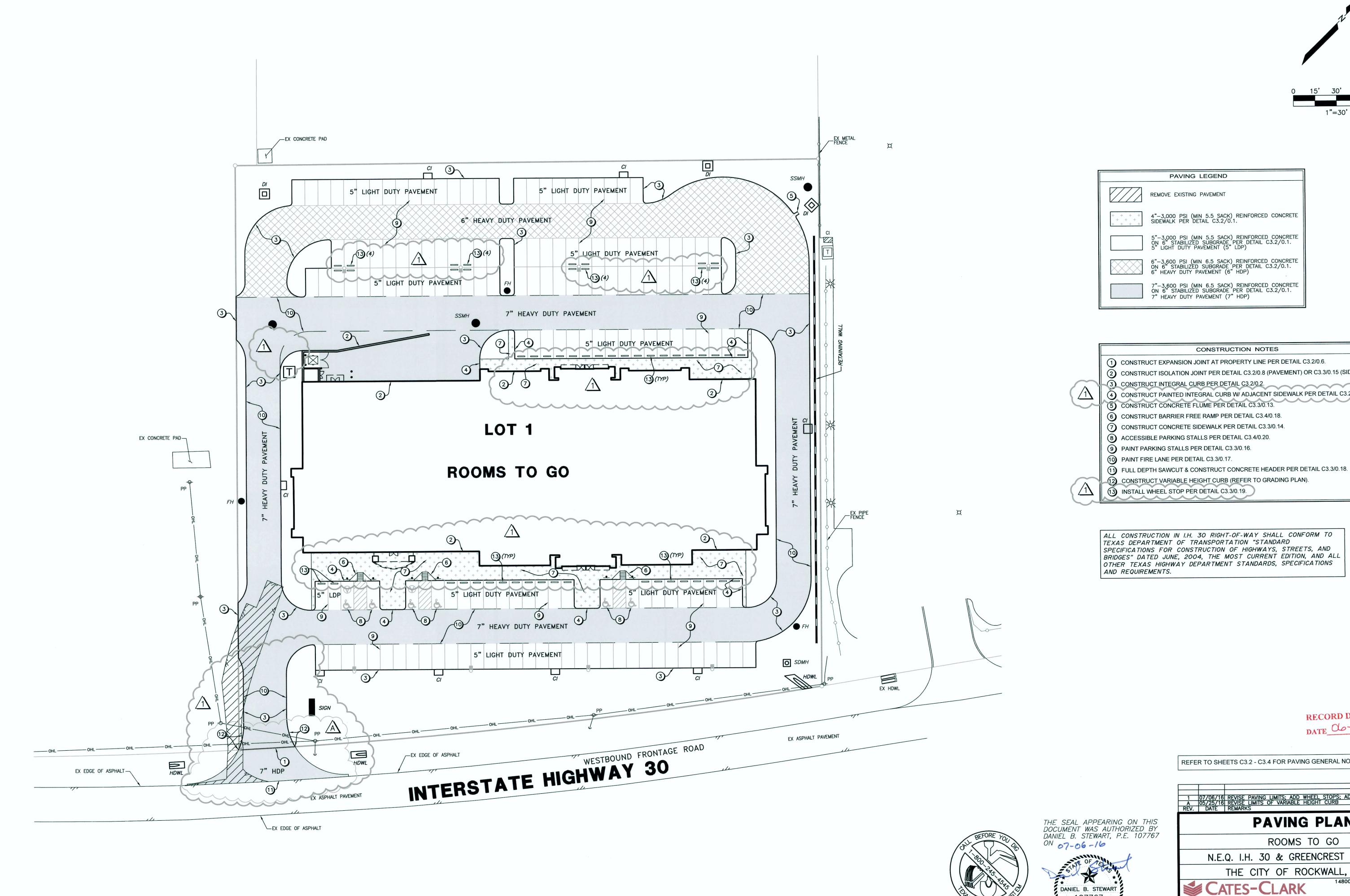


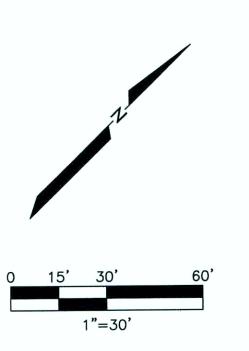
THE SEAL APPEARING ON THIS

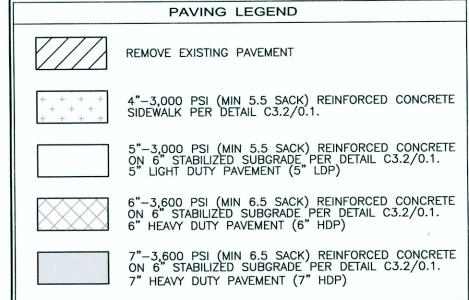


WASTEWATER









CONSTRUCTION NOTES

- 2 CONSTRUCT ISOLATION JOINT PER DETAIL C3.2/0.8 (PAVEMENT) OR C3.3/0.15 (SIDEWALK).
- (4) CONSTRUCT PAINTED INTEGRAL CURB W/ ADJACENT SIDEWALK PER DETAIL C3.2/0.3.
- (6) CONSTRUCT BARRIER FREE RAMP PER DETAIL C3.4/0.18.
- (7) CONSTRUCT CONCRETE SIDEWALK PER DETAIL C3.3/0.14.
- 8 ACCESSIBLE PARKING STALLS PER DETAIL C3.4/0.20.

ALL CONSTRUCTION IN I.H. 30 RIGHT-OF-WAY SHALL CONFORM TO TEXAS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES" DATED JUNE, 2004, THE MOST CURRENT EDITION, AND ALL OTHER TEXAS HIGHWAY DEPARTMENT STANDARDS, SPECIFICATIONS AND REQUIREMENTS.

> RECORD DRAWING DATE 00-26-17

REFER TO SHEETS C3.2 - C3.4 FOR PAVING GENERAL NOTES AND DETAILS.

1 07/06/16 REVISE PAVING LIMITS; ADD WHEEL STOPS; ADD PAINT TO SIDEWALK CUFA 05/25/16 REVISE LIMITS OF VARIABLE HEIGHT CURB

REV. DATE REMARKS

PAVING PLAN

ROOMS TO GO

N.E.Q. I.H. 30 & GREENCREST BOULEVARD

THE CITY OF ROCKWALL, TEXAS

DESIGN DRAWN DATE SCALE NOTES FILE 112-009 PAVING 02/22/16 1"=30" CCA

PAVING GENERAL NOTES

- 1. STANDARDS AND SPECIFICATIONS: ALL MATERIALS, CONSTRUCTION METHODS, WORKMANSHIP, EQUIPMENT, SERVICES AND TESTING FOR ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE PROJECT DOCUMENTS AND THE GOVERNING AUTHORITIES' REQUIREMENTS. IN THE EVENT OF A CONFLICT BETWEEN THE PROJECT DOCUMENTS AND THE GOVERNING AUTHORITIES' REQUIREMENTS, THE MORE STRINGENT SHALL APPLY.
- 2. GEOTECHNICAL REPORT: SUBGRADE PREPARATION AND PAVEMENT STRENGTH AND THICKNESS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT BY ALPHA TESTING, INC., PROJECT NO. G152918 DATED FEBRUARY 5, 2016 AND SUPPLEMENTS AND/OR AMENDMENTS THERETO.
- 3. PAVEMENT WARRANTY: THE CONTRACTOR SHALL PROVIDE A TWO (2) YEAR UNCONDITIONAL MAINTENANCE FREE WARRANTY ON ALL PAVEMENT SURFACES.
- 4. PROOF-ROLL SUBGRADE: PRIOR TO PREPARATION OF THE SUBGRADE, THE SUBGRADE SHALL BE PROOF-ROLLED WITH HEAVY PNEUMATIC EQUIPMENT. ANY SOFT OR PUMPING AREAS SHALL BE EXCAVATED TO FIRM SUBGRADE AND BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
- 5. PAVEMENT SUBGRADE PREPARATION: PAVEMENT SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. THE SUBGRADE SHALL BE SCARIFIED TO A DEPTH OF SIX INCHES (6") MIXED WITH A MINIMUM OF EIGHT PERCENT (8%) HYDRATED LIME, AND COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698) WITHIN THE RANGE OF 0% TO 4% ABOVE THE MIXTURE'S OPTIMUM MOISTURE CONTENT. DENSITY TEST MUST BE TAKEN NO MORE THAN 72 HOURS PRIOR TO PLACEMENT OF CONCRETE. THE SUBGRADE SHALL BE PROTECTED AND MAINTAINED IN A MOIST CONDITION UNTIL THE PAVEMENT IS PLACED. PAVEMENT SUBGRADES SHALL BE GRADED TO PREVENT PONDING AND INFILTRATION OF EXCESSIVE MOISTURE ON OR ADJACENT TO THE PAVEMENT SUBGRADE.
- 6. SAND CUSHION PROHIBITED: THE USE OF "LEVEL UP" SAND UNDER CONCRETE PAVEMENT FOR DRIVES AND PARKING AREAS WILL NOT BE ACCEPTED. (THIS IS NOT APPLICABLE TO SIDEWALKS).
- 7. CONCRETE PAVEMENT DESIGN: ALL ON SITE CONCRETE PAVEMENTS SHALL BE THE THICKNESS, COMPRESSIVE STRENGTH (28 DAYS) AND REINFORCED AS SHOWN ON THE PAVING PLAN AND DETAILS. THE CONCRETE SHALL HAVE A WATER-CEMENT RATIO TO PRODUCE A MINIMUM OF 3 TO MAXIMUM OF 5 INCH SLUMP AND CONTAIN PERCENT-ENTRAINED AIR RANGING FROM 4 TO 6. FLY ASH IN CONCRETE IS PROHIBITED.
- 8. REINFORCING BARS: ALL REINFORCING BARS SHALL BE GRADE 60 KSI DEFORMED BILLET STEEL BARS, UNCOATED FINISH. SIZE AND SPACING SHALL BE IN ACCORDANCE WITH THE PAVING PLAN AND DETAILS.
- 9. BAR CHAIRS: ALL REINFORCING STEEL AND DOWEL BARS IN PAVEMENT SHALL BE SUPPORTED AND MAINTAINED AT THE CORRECT CLEARANCES BY THE USE OF BAR CHAIRS.
- 10. WEATHER CONDITIONS FOR CONCRETE PLACEMENT: CONCRETE SHALL NOT BE PLACED WHEN THE TEMPERATURE IS BELOW 40 DEGREES FAHRENHEIT AND FALLING, BUT MAY BE PLACED WHEN THE TEMPERATURE IS ABOVE 35 DEGREES FAHRENHEIT AND RISING. THE TEMPERATURE READING SHALL BE TAKEN IN THE SHADE AWAY FROM ARTIFICIAL HEAT. DO NOT PLACE CONCRETE WHILE IT IS RAINING OR RAIN IS IMMINENT.
- 11. CONCRETE PLACEMENT: CONCRETE SHALL BE PLACED IN STRIPS NOT TO EXCEED 30' IN WIDTH, UNLESS PUMPED.
- 12. CONCRETE PAVEMENT CURING: CONCRETE SHALL BE BROOM FINISHED AND CURED FOR A MINIMUM OF 72 HOURS.

13. PAVEMENT JOINTING:

a. JOINT LAYOUT: CONTRACTOR SHALL PREPARE A JOINT LAYOUT AND PROVIDE IT TO THE ENGINEER FOR REVIEW. THE JOINT LAYOUT SHALL BE PROVIDED A MINIMUM OF ONE (1) WEEK PRIOR TO PLACING PAVEMENT. JOINTS SHALL BE SPACED AS FOLLOWS:

CONTROL JOINTS:

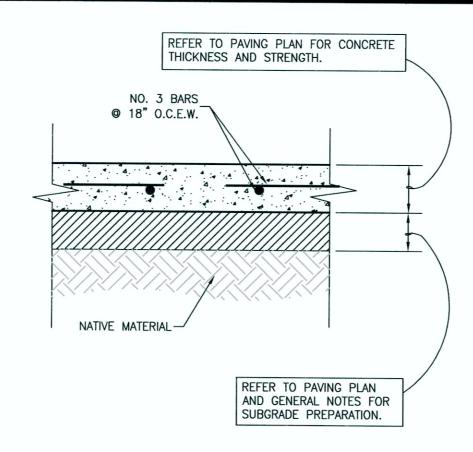
15' MAX.

THE JOINT PATTERN SHALL BE CAREFULLY LAID OUT BY THE CONTRACTOR TO AVOID IRREGULAR SHAPES. EXPANSION JOINTS SHALL NOT BE LOCATED ALONG "VALLEYS" IN THE PAVEMENT SUSCEPTIBLE TO STORM WATER DRAINAGE FLOW.

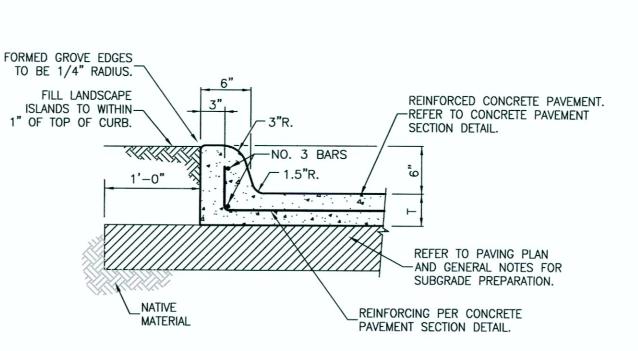
- b. SAW CUTTING: SAW CUTTING SHALL BE DONE WITHIN 8 HOURS OF POUR OR AS SOON AS CONCRETE CAN SUPPORT WEIGHT. ALL SAWED JOINTS ARE TO BE TRUE IN ALIGNMENT AND SHALL CONTINUE THROUGH THE CURB. RADIAL JOINTS SHALL BE NO SHORTER THAN 18 INCHES.
- c. JOINT SEALING: JOINTS SHALL BE SAWN, CLEANED OF DEBRIS, DIRT, DUST, SCALE, CURING COMPOUND AND CONCRETE, BLOWN DRY AND IMMEDIATELY SEALED. UNLESS NOTED OTHERWISE, SEALANT MATERIAL SHALL BE HOT POURED RUBBER JOINT SEALING COMPOUND.
- 14. PAVEMENT REMOVAL: BREAKOUTS FOR REMOVAL OF EXISTING PAVEMENT AND CURBS SHALL BE MADE BY FULL DEPTH SAW CUT WHEN ADJACENT TO PROPOSED PAVEMENT AND/OR CURBS.
- 15. CONNECTION TO EXISTING PAVEMENT: PROPOSED PAVEMENT AND/OR CURBS SHALL MATCH THE ELEVATION OF EXISTING PAVEMENT AND/OR CURBS.

16. PAVEMENT MARKINGS:

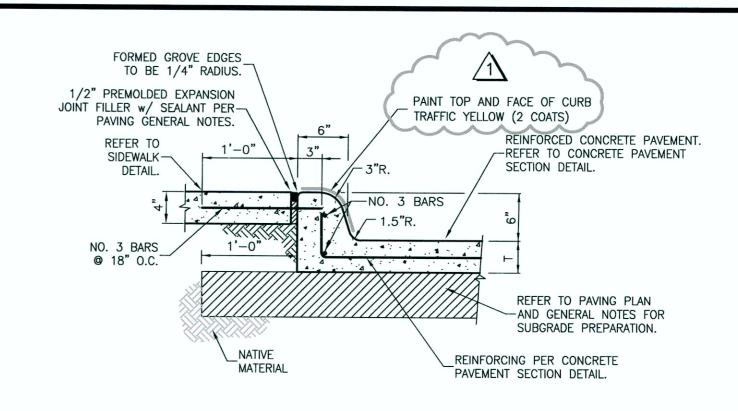
- a. PAVEMENT MARKINGS SHALL BE PROVIDED IN ACCORDANCE WITH THE TEXAS "UNIFORM TRAFFIC MANUAL FOR PAVEMENT MARKINGS".
- **b.** FIRE LANES SHALL BE STRIPED IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' REQUIREMENTS.
- c. ALL ACCESSIBLE PAVEMENT MARKINGS SHALL COMPLY WITH ADAAG STANDARDS AND STATE AND LOCAL CODES.
- d. PARKING SPACE STRIPES, ACCESSIBLE SPACES, PEDESTRIAN STRIPING, DIRECTIONAL ARROWS AND LETTERING SHALL BE SOLID WHITE, UNLESS A SPECIFIC COLOR IS REQUIRED BY LOCAL CODE. TWO (2) COATS OF VOC COMPLIANT, LOCAL DOT APPROVED, UNDILUTED, SOLVENT BASED OR LATEX TRAFFIC PAINT SHALL BE APPLIED. USE MANUFACTURER'S RECOMMENDED APPLICATION RATE, WITHOUT ADDITION OF A THINNER, WITH A MAXIMUM OF 100 SQUARE FEET PER GALLON OR AS REQUIRED PROVIDING MINIMUM 15 MILS WET FILM THICKNESS AND 7 ½ MILS DRY FILM THICKNESS PER COAT WITH A MINIMUM OF 30 DAYS BETWEEN APPLICATIONS. THE SECOND COAT OF PAINT SHALL NOT BE APPLIED EARLIER THAN 7 DAYS PRIOR TO THE STORE OPENING. PAINT SHALL BE CRISP, STRAIGHT AND APPLIED UNIFORMLY ACROSS THE WIDTH OF THE LINE FOR A MINIMUM TOTAL DRY FILM THICKNESS OF 15 MILS.
- 17. CONDUIT: CONTRACTOR SHALL REFER TO THE SITE MEP PLAN AND LANDSCAPE IRRIGATION PLAN FOR CONDUIT TO BE INSTALLED UNDER PAVEMENT PRIOR TO COMMENCING PAVEMENT SUBGRADE PREPARATION.
- 18. TESTING: TESTING SHALL BE PERFORMED BY A QUALIFIED TESTING LABORATORY, EMPLOYED AND PAID DIRECTLY BY THE OWNER. TESTING SHALL BE PERFORMED, AT A MINIMUM, IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND CITY OF ROCKWALL REQUIREMENTS (1-7 DAY, 1-14 DAY, 2-28 DAY, NO AVERAGING). IN THE EVENT THE RESULTS OF THE INITIAL TESTING DO NOT COMPLY WITH THE PLANS AND THE SPECIFICATIONS, SUBSEQUENT TESTS NECESSARY TO DETERMINE THE ACCEPTABILITY OF CONSTRUCTION SHALL BE AT THE CONTRACTOR'S EXPENSE. PAVEMENT FOUND TO BE DEFICIENT IN STRENGTH OR THICKNESS SHALL BE REMOVED AND REPLACED SOLELY AT THE EXPENSE OF THE CONTRACTOR.
- 19. CLEAN UP FOR FINAL ACCEPTANCE: THE CONTRACTOR SHALL MAKE A FINAL CLEAN UP OF ALL PAVED AREAS PRIOR TO ACCEPTANCE BY THE OWNER. THIS CLEAN UP SHALL INCLUDE POWER WASHING THE PAVEMENT IF REQUIRED.



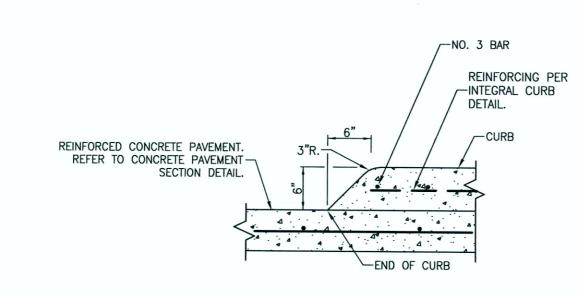
0.1 CONCRETE PAVEMENT SECTION
N.T.S.



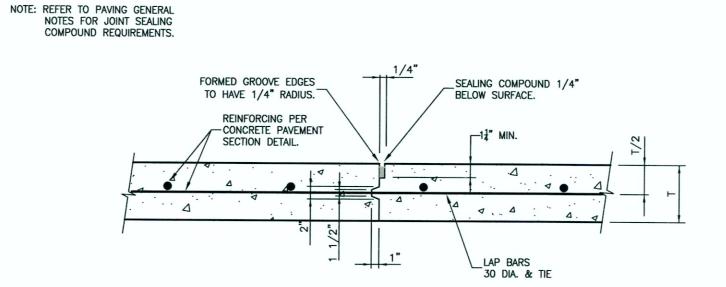
0.2 INTEGRAL CURB



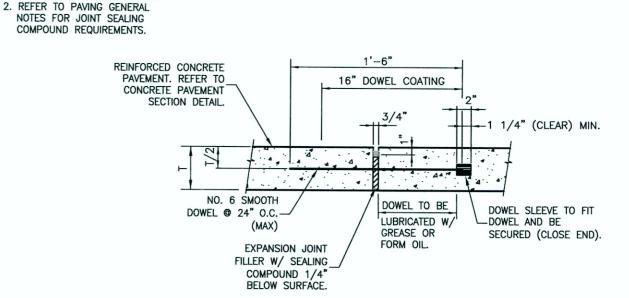
0.3 INTEGRAL CURB w/ SIDEWALK



0.4 END CURB

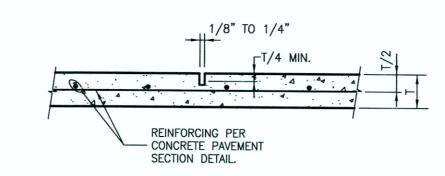


0.5 CONSTRUCTION JOINT

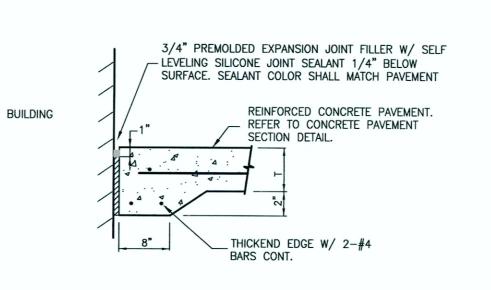


0.6 EXPANSION JOINT

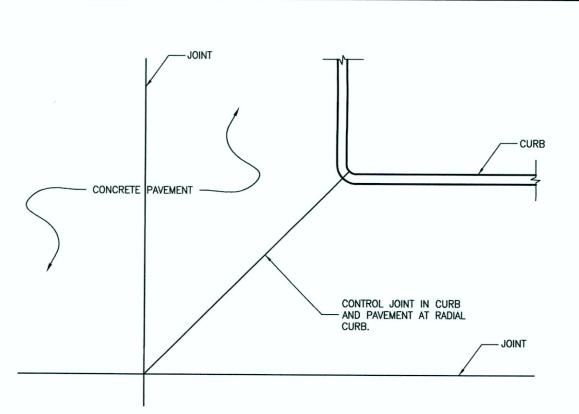
NOTE: REFER TO PAVING GENERAL NOTES FOR JOINT SEALING COMPOUND REQUIREMENTS.



0.7 CONTROL JOINT



0.8 PAVEMENT ISOLATION JOINT AT BUILDING

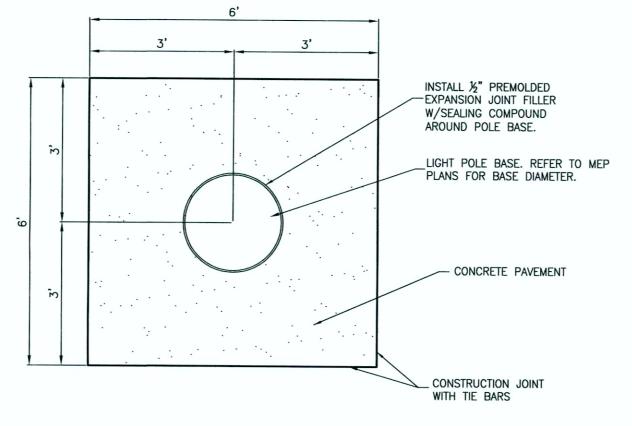


0.9 CONTROL JOINT AT RADIAL CURB

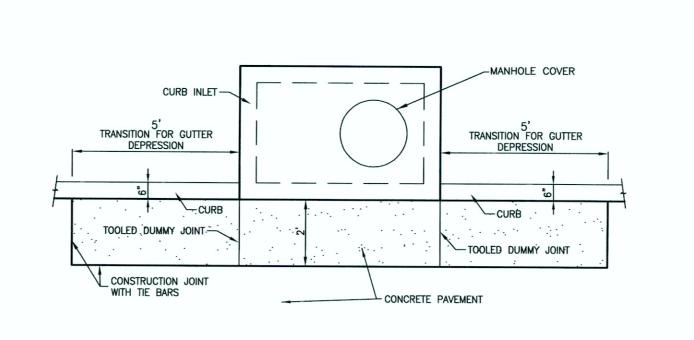
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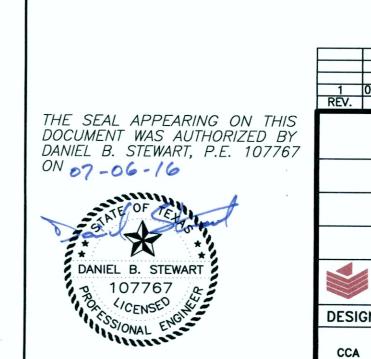
N.T.S.



0.10 LIGHT POLE BLOCKOUT



0.11 CURB INLET BLOCKOUT



EXPANSION JOINT FILLER
 W/SEALANT TO BE INSTALLED IN

RECORD DRAWING
DATE 06-26-17

112-009 PAVING DET

C3.2

1 07/06/16 ADD PAINT TO CURB (DETAIL 0.3)
REV. DATE REMARKS

ROOMS TO GO

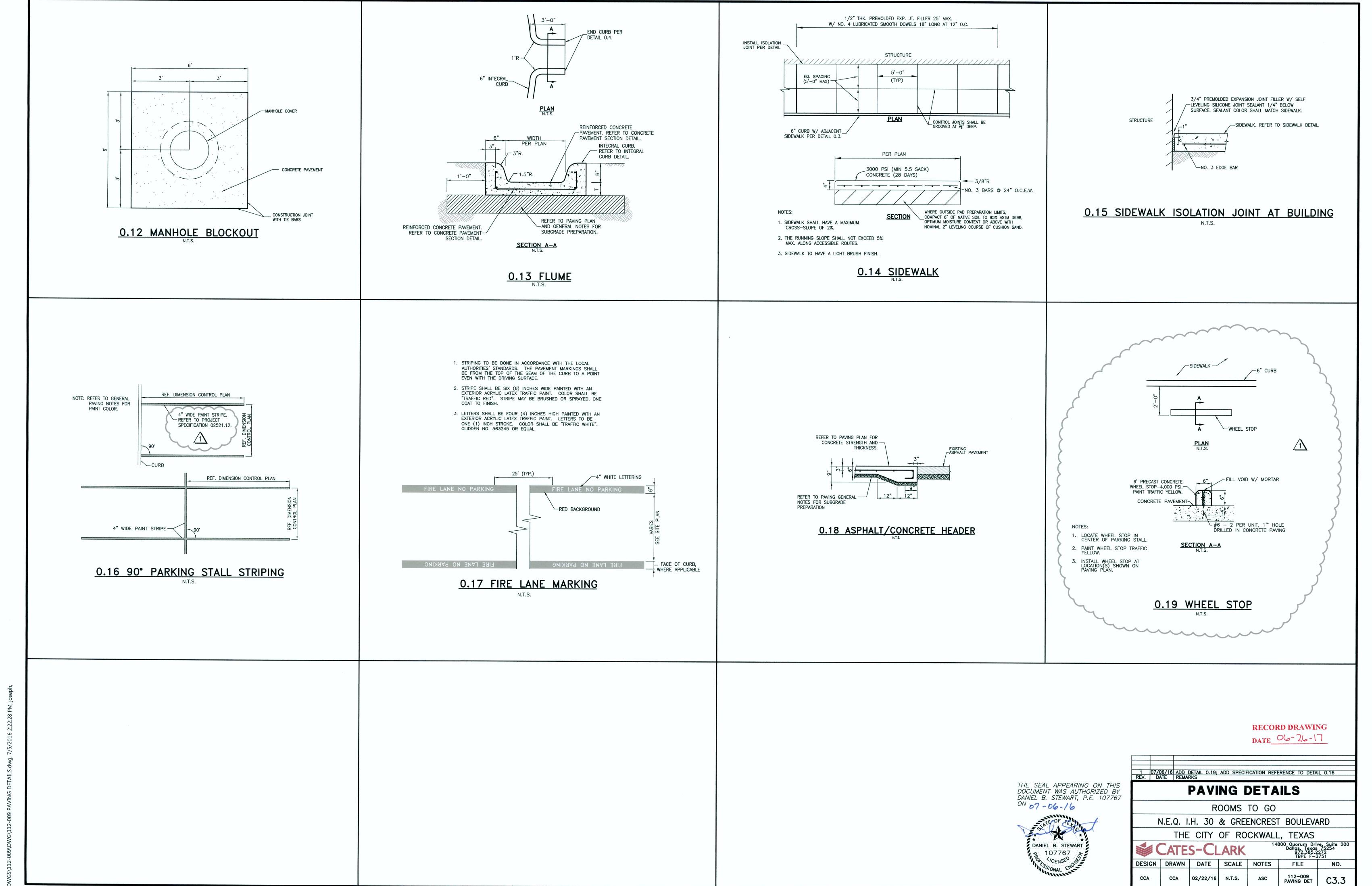
N.E.Q. I.H. 30 & GREENCREST BOULEVARD

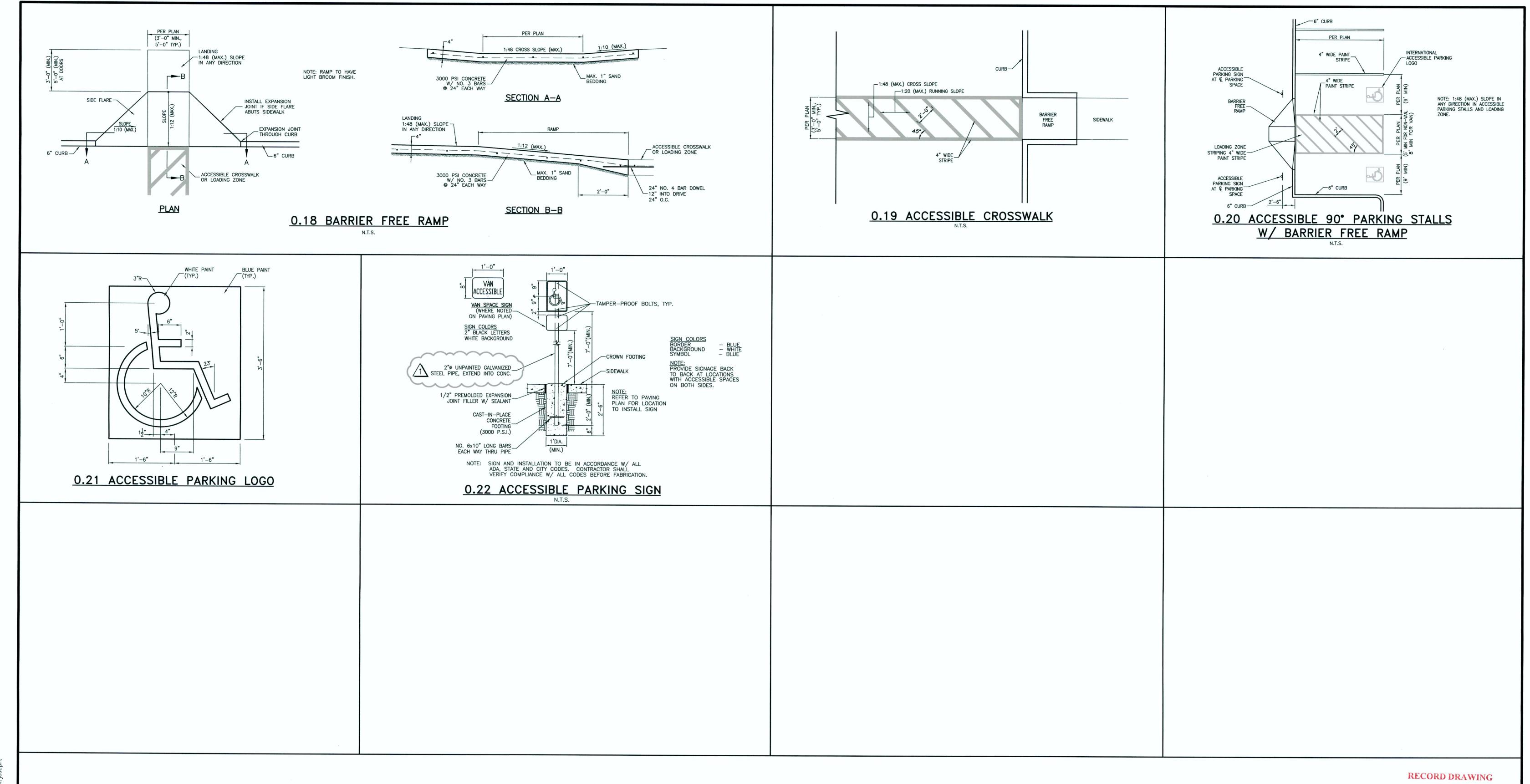
THE CITY OF ROCKWALL, TEXAS

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972.385.2272
TBPE F-3751

DESIGN DRAWN DATE SCALE NOTES FILE NO.

ASC





ACCESSIBILITY GENERAL NOTES

- 1. ACCESSIBLE ROUTES: SIDEWALKS, BARRIER FREE RAMPS AND CROSSWALKS ALONG ACCESSIBLE ROUTES AND ACCESSIBLE PARKING SPACES SHALL BE IN ACCORDANCE WITH CURRENT ADA AND TAS REGULATIONS.
- 2. MAXIMUM SLOPES: THE MAXIMUM SLOPE ALONG ACCESSIBLE ROUTES SHALL BE AS FOLLOWS:

RUNNING SLOPE: 1:20 (5.00%)

a. ACCESSIBLE SIDEWALK:

CROSS-SLOPE: 1:48 (2.08%) RUNNING SLOPE: 1:12 (8.33%) b. BARRIER FREE RAMP:

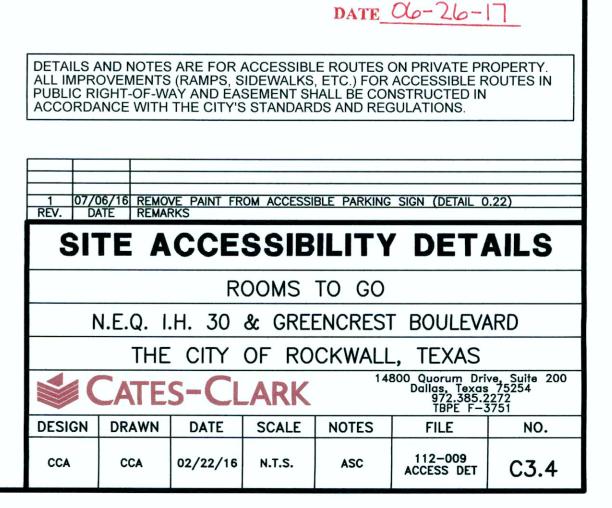
CROSS-SLOPE: 1:48 (2.08%) c. ACCESSIBLE CROSSWALK: RUNNING SLOPE: 1:20 (5.00%)

CROSS-SLOPE: 1:48 (2.08%)

- d. ACCESSIBLE PARKING SPACE: 1:48 (2.08%) ANY DIRECTION. e. ACCESSIBLE LANDING: 1:48 (2.08%) ANY DIRECTION.
- f. COUNTER SLOPE AT RAMP: COUNTER SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE CURB RAMP SHALL NOT BE STEEPER THAN 1:20 (5.00%).
- g. ADJACENT SURFACE AT RAMP: THE ADJACENT SURFACES AT TRANSITIONS AT CURB RAMPS TO WALKS, GUTTERS AND STREETS SHALL BE AT THE SAME LEVEL.
- IF THE MAXIMUM SLOPE IS EXCEEDED, THE CONTRACTOR SHALL REMOVE AND REPLACE THE IMPROVEMENTS AT HIS EXPENSE.

3. PAVEMENT MARKINGS:

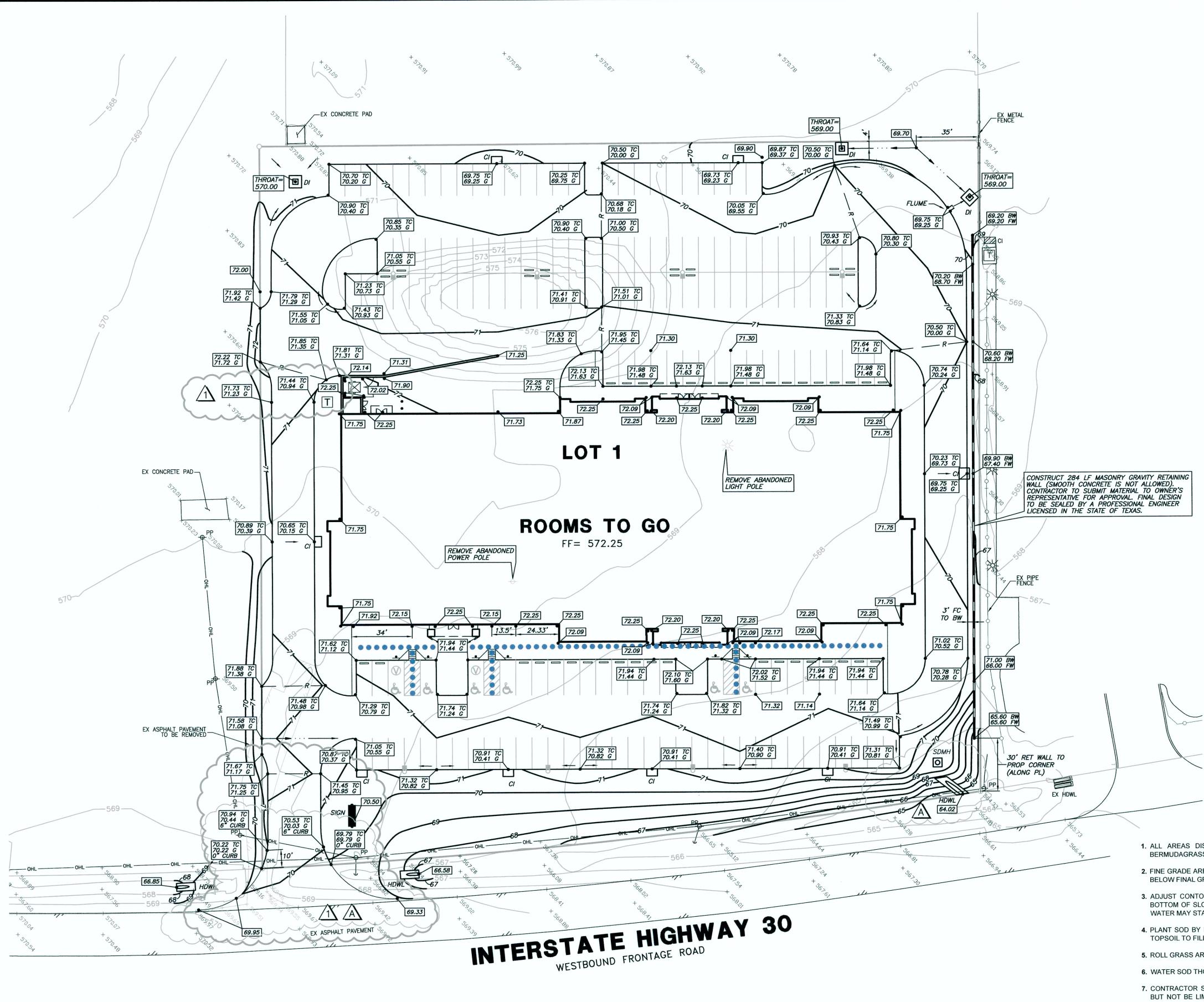
- a. PAVEMENT MARKINGS SHALL BE PROVIDED IN ACCORDANCE WITH THE TEXAS "UNIFORM TRAFFIC MANUAL FOR PAVEMENT MARKINGS".
- b. ALL ACCESSIBLE PAVEMENT MARKINGS SHALL COMPLY WITH ADAAG STANDARDS AND STATE AND LOCAL
- c. PARKING SPACE STRIPES, ACCESSIBLE SPACES, PEDESTRIAN STRIPING AND LETTERING SHALL BE SOLID WHITE, UNLESS A SPECIFIC COLOR IS REQUIRED BY LOCAL CODE. TWO (2) COATS OF VOC COMPLIANT, LOCAL DOT APPROVED, UNDILUTED, SOLVENT BASED OR LATEX TRAFFIC PAINT SHALL BE APPLIED. USE MANUFACTURER'S RECOMMENDED APPLICATION RATE, WITHOUT ADDITION OF A THINNER, WITH A MAXIMUM OF 100 SQUARE FEET PER GALLON OR AS REQUIRED PROVIDING MINIMUM 15 MILS DRY FILM THICKNESS. PAINT SHALL BE CRISP, STRAIGHT AND APPLIED UNIFORMLY ACROSS THE WIDTH OF THE LINE.



THE SEAL APPEARING ON THIS

DOCUMENT WAS AUTHORIZED BY DANIEL B. STEWART, P.E. 107767

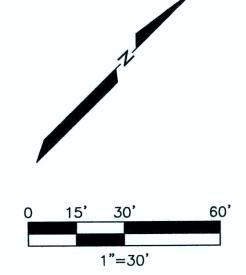
ON 07-06-16



ALL CONSTRUCTION IN I.H. 30 RIGHT-OF-WAY SHALL CONFORM TO TEXAS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES" DATED JUNE, 2004, THE MOST CURRENT EDITION, AND ALL OTHER TEXAS HIGHWAY DEPARTMENT STANDARDS, SPECIFICATIONS AND REQUIREMENTS.

LEGEND —660— EXISTING CONTOUR PROPOSED CONTOUR × 570.38 EXISTING SPOT ELEVATION PROPOSED SPOT ELEVATION PROPOSED TOP OF CURB (TC) & GUTTER (G) ELEVATION PROPOSED FINISHED GRADE AT BACK OF WALL (BW) & FACE OF WALL (FW) ----- R----- RIDGE (GRADE BREAK)

ACCESSIBLE ROUTE



GRADING GENERAL NOTES

- 1. GEOTECHNICAL REPORT: SITE PREPARATION, GRADING, FILL COMPACTION, AND BUILDING PAD PREPARATION SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT BY ALPHA TESTING, INC. PROJECT NO. G152918, DATED FEBRUARY 5, 2016. IN THE EVENT OF A CONFLICT BETWEEN THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND THE NOTES ON THE GRADING PLAN, THE GEOTECHNICAL REPORT SHALL GOVERN.
- 2. TOPOGRAPHIC SURVEY: TOPOGRAPHIC SURVEY INFORMATION IS BASED ON THE TOPOGRAPHIC SURVEY PREPARED BY ADAMS SURVEYING COMPANY, LLC, DATED 01/20/2016.
- 3. EXISTING CONDITIONS: PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTING CONDITIONS, INCLUDING GRADES AND DIMENSIONS. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES.
- 4. UNDISTURBED AREAS: PRIOR TO COMMENCING CLEARING, GRADING OR SITE CONSTRUCTION, THE CONTRACTOR SHALL MEET WITH THE DEVELOPER AND/OR ENGINEER AT THE SITE TO ASCERTAIN THE AREA(S) OF THE PROJECT SITE THAT
- EROSION CONTROL: EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO COMMENCING CLEARING, STRIPPING AND GRADING OPERATIONS. REFER TO THE EROSION CONTROL PLAN FOR THE SEQUENCE OF EROSION CONTROL DEVICES TO BE INSTALLED.
- 6. PROPOSED GRADES: THE PROPOSED ELEVATIONS AND CONTOURS SHOWN ARE TO FINISHED GRADE. THE PROPOSED CONTOURS ARE APPROXIMATE. THE PROPOSED SPOT ELEVATIONS AND GRADIENTS ARE TO BE USED IN THE EVENT OF ANY DISCREPANCY WITH THE PROPOSED CONTOURS. MINOR ADJUSTMENT TO FINISH GRADE TO ACCOMPLISH SPOT DRAINAGE IS ACCEPTABLE.
- 7. ACCESSIBLE ROUTES/PARKING: SIDEWALKS AND CROSSWALKS ALONG ACCESSIBLE ROUTES SHALL BE IN ACCORDANCE WITH TAS AND ADA STANDARDS WITH A MAXIMUM RUNNING SLOPE OF 5% AND A MAXIMUM CROSS SLOPE OF 2%. ACCESSIBLE PARKING SPACES SHALL HAVE A MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS.
- 8. STRIPPING AND DEBRIS REMOVAL: THE BUILDING PAD(S), AREAS TO BE PAVED, AND ALL AREAS THAT ARE TO RECEIVE FILL MATERIAL SHALL BE STRIPPED OF VEGETATION, TREES, ROOTS, STUMPS, DEBRIS AND OTHER ORGANIC MATERIAL THE DEPTH OF THE STRIPPING SHALL BE BASED ON THE DEPTH OF SURFACE SOIL CONTAINING ORGANIC MATERIAL. ALL TREES, INCLUDING STUMPS AND ROOT SYSTEMS, VEGETATION, DEBRIS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OFF SITE. STRIPPED TOPSOIL SHALL BE STOCKPILED IN A LOCATION ON THE SITE APPROVED BY THE DEVELOPER.
- 9. BURNING: BURNING SHALL NOT BE ALLOWED ON THE PROJECT SITE UNLESS APPROVED IN WRITING BY THE GOVERNING AUTHORITIES AND THE DEVELOPER.
- 10. PROOF-ROLLING: AFTER COMPLETION OF THE NECESSARY STRIPPING, CLEARING AND EXCAVATION AND PRIOR TO PLACING ANY REQUIRED FILL, THE EXPOSED SUBGRADE SHALL BE EVALUATED BY PROOF ROLLING WITH A HEAVY PNEUMATIC TIRED ROLLER, LOADED DUMP TRUCK OR SIMILAR EQUIPMENT WEIGHING APPROXIMATELY 10 TONS TO CHECK FOR POCKETS OF SOFT OR LOOSE MATERIAL. THE PROOF-ROLLING PROCEDURES SHOULD BE OBSERVED BY THE GEOTECHNICAL ENGINEER OR DESIGNATED REPRESENTATIVE. ANY UNDESIRABLE MATERIAL EXPOSED FROM PROOF-ROLLING SHALL BE REMOVED. PRIOR TO THE PLACEMENT OF ANY FILL, THE EXPOSED SUBGRADE SHOULD BE SCARIFIED TO A MINIMUM DEPTH OF 6 INCHES AND RECOMPACTED.
- 11. CONTROLLED FILL: ALL SOILS USED FOR CONTROLLED FILL SHALL BE FREE OF ROOTS, VEGETATION, AND OTHER DELETERIOUS OR UNDESIRABLE MATTER. THE FILL MATERIAL SHALL BE PLACED IN LEVEL, UNIFORM LIFTS, WITH EACH LIFT COMPACTED TO THE MINIMUM DRY DENSITY WITHIN THE COMPACTION SOIL MOISTURE RANGES RECOMMENDED. THE LOOSE LIFT DEPTH SHALL NOT EXCEED 8". EACH LAYER SHALL BE PROPERLY PLACED, MIXED, SPREAD AND COMPACTED IN ACCORDANCE WITH THE FILL COMPACTION SECTION.
- 12. FILL COMPACTION: FILL COMPACTION SHALL BE PERFORMED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. ALL COMPACTED AREAS OUTSIDE THE BUILDING FOOTPRINT SHALL BE COMPACTED TO 95% STANDARD PROCTOR USING A
- 13. BUILDING PADS: THE BUILDING PADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
- 14. LANDSCAPE AREAS: REFER TO THE LANDSCAPE PLAN FOR SOIL REQUIREMENTS IN LANDSCAPE AREAS.
- 15. TESTING: TESTING SHALL BE PERFORMED BY A QUALIFIED TESTING LABORATORY, EMPLOYED AND PAID DIRECTLY BY THE OWNER. TESTING SHALL BE PERFORMED, AT A MINIMUM, IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT. IN THE EVENT THE RESULTS OF THE INITIAL TESTING DO NOT COMPLY WITH THE PLANS AND SPECIFICATIONS, SUBSEQUENT TESTS NECESSARY TO DETERMINE THE ACCEPTABILITY OF CONSTRUCTION SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 16. **DETENTION SYSTEM:** THE DETENTION SYSTEM (REFER TO SHEETS C5.2 & C6.2) IS REQUIRED TO BE FULLY INSTALLED AND PREPARED FOR USE PRIOR TO PLACEMENT OF ANY CONCRETE PAVEMENT (INCLUDING BUILDING SLAB).

SOLID SOD NOTES (TxDOT R.O.W.)

- 1. ALL AREAS DISTURBED WITHIN TXDOT RIGHT OF WAY SHALL BE SOLID SOD WITH COMMON
- 2. FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS INDICATED. LEAVE AREAS TO RECEIVE SOD 1-INCH BELOW FINAL GRADE.
- 3. ADJUST CONTOURS TO ACHIEVE POSITIVE DRAINAGE. PROVIDE UNIFORM ROUNDING AT TOP AND BOTTOM OF SLOPES AND OTHER BREAKS IN GRADE. CORRECT IRREGULARITIES AND AREAS WHERE WATER MAY STAND.
- 4. PLANT SOD BY HAND. ENSURE EDGES OF SOD ARE TOUCHING. TOP DRESS JOINTS BY HAND WITH TOPSOIL TO FILL VOIDS.
- 5. ROLL GRASS AREAS TO ACHIEVE A SMOOTH, EVEN SURFACE, FREE FROM UNNATURAL UNDULATIONS.
- 6. WATER SOD THOROUGHLY AS SOD OPERATION PROGRESSES.
- 7. CONTRACTOR SHALL MAINTAIN ALL LAWN AREAS UNTIL FINAL ACCEPTANCE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: MOWING, WATERING, WEEDING, CULTIVATING, CLEANING AND REPLACING DEAD OR BARE AREAS TO KEEP PLANTS IN A VIGOROUS, HEALTHY CONDITION.
- 8. CONTRACTOR SHALL GUARANTEE ESTABLISHMENT OF AN ACCEPTABLE TURF AREA AND SHALL PROVIDE REPLACEMENT FROM LOCAL SUPPLY IF NECESSARY.



RECORD DRAWING

DATE 00-26-17

DOCUMENT WAS AUTHORIZED BY DANIEL B. STEWART, P.E. 107767 ON 07-06-16 DANIEL B. STEWART

THE SEAL APPEARING ON THIS

BENCHMARKS:

CITY BENCHMARK: CITY OF ROCKWALL CONTROL MONUMENT (3 INCH BRASS CAP SET IN CONCRETE) IN THE MEDIAN OF SUMMIT RIDGE DRIVE AT THE INTERSECTION OF SUMMIT RIDGE DRIVE & F.M. 740 (RIDGE ROAD). PUBLISHED ELEV= 578.63'

ITE BENCHMARK
"X" CUT ON SIDEWALK AT THE NORTHWEST CORNER OF GREENCREST BOULEVARD & INTERSTATE 30 WESTBOUND FRONTAGE ROAD. ELEVATION= 569.21'

- "X" CUT ON THE HEADWALL OF AN 18" RCP LOCATED BETWEEN THE WESTBOUND FRONTAGE ROAD AND MAIN LANES OF INTERSTATE 30 AT GREENCREST BOULEVARD. ELEVATION= 568.84'
- . IRON ROD SET WITH A YELLOW PLASTIC CAP STAMPED "ADAMS SURVEYING 5610" NEAR THE NORTHEAST CORNER OF THE PROPOSED SUBJECT TRACT. ELEVATION= 569.60'
- . IRON ROD SET WITH A YELLOW PLASTIC CAP STAMPED "ADAMS SURVEYING 5610" NEAR THE SOUTHEAST CORNER OF THE PROPOSED SUBJECT TRACT.

ELEVATION= 564.60'

1 07/06/16 REVISE GRADING PER DRIVE REVISIONS
A 05/25/16 REVISE LIMITS OF VARIABLE HEIGHT CURB; REVISE GRADING AROUND HEADWALL
REV. DATE REMARKS

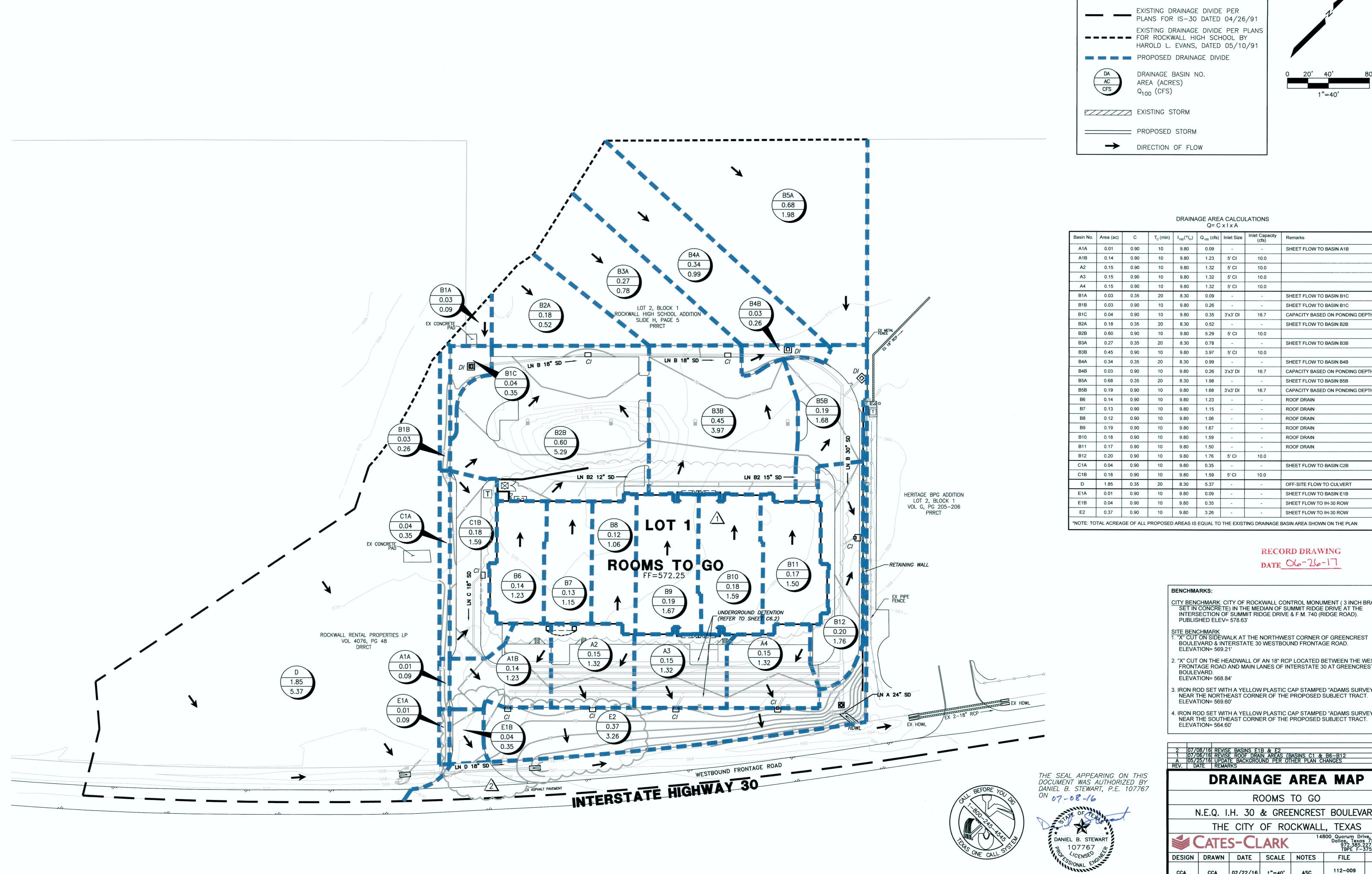
GRADING PLAN

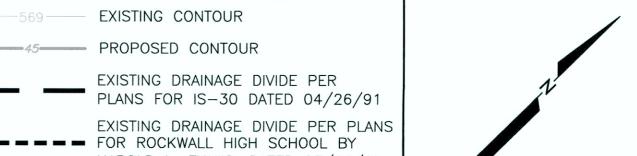
ROOMS TO GO

N.E.Q. I.H. 30 & GREENCREST BOULEVARD

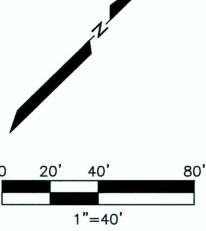
THE CITY OF ROCKWALL, TEXAS

FILE NO. DESIGN | DRAWN | DATE | SCALE | NOTES 112-009 02/22/16 1"=30" ASC CCA GRADING





LEGEND



Basin No.	Area (ac)	С	T _c (min)	I ₁₀₀ (in/ _{hr})	Q ₁₀₀ (cfs)	Inlet Size	Inlet Capacity (cfs)	Remarks
A1A	0.01	0.90	10	9.80	0.09	-	-	SHEET FLOW TO BASIN A1B
A1B	0.14	0.90	10	9.80	1.23	5' CI	10.0	
A2	0.15	0.90	10	9.80	1.32	5' CI	10.0	
А3	0.15	0.90	10	9.80	1.32	5' CI	10.0	
A4	0.15	0.90	10	9.80	1.32	5' CI	10.0	
B1A	0.03	0.35	20	8.30	0.09	-	-	SHEET FLOW TO BASIN B1C
B1B	0.03	0.90	10	9.80	0.26	-	-	SHEET FLOW TO BASIN B1C
B1C	0.04	0.90	10	9.80	0.35	3'x3' DI	16.7	CAPACITY BASED ON PONDING DEPTH OF 7"
B2A	0.18	0.35	20	8.30	0.52	-	-	SHEET FLOW TO BASIN B2B
B2B	0.60	0.90	10	9.80	5.29	5' CI	10.0	
вза	0.27	0.35	20	8.30	0.78	-	-	SHEET FLOW TO BASIN B3B
B3B	0.45	0.90	10	9.80	3.97	5' CI	10.0	
B4A	0.34	0.35	20	8.30	0.99	-	-	SHEET FLOW TO BASIN B4B
B4B	0.03	0.90	10	9.80	0.26	3'x3' DI	16.7	CAPACITY BASED ON PONDING DEPTH OF 7"
B5A	0.68	0.35	20	8.30	1.98	-	-	SHEET FLOW TO BASIN B5B
B5B	0.19	0.90	10	9.80	1.68	3'x3' DI	16.7	CAPACITY BASED ON PONDING DEPTH OF 7"
B6	0.14	0.90	10	9.80	1.23	-	-	ROOF DRAIN
В7	0.13	0.90	10	9.80	1.15	-	-	ROOF DRAIN
B8	0.12	0.90	10	9.80	1.06	-	-	ROOF DRAIN
В9	0.19	0.90	10	9.80	1.67	1-	-	ROOF DRAIN
B10	0.18	0.90	10	9.80	1.59	-	-	ROOF DRAIN
B11	0.17	0.90	10	9.80	1.50	-	-	ROOF DRAIN
B12	0.20	0.90	10	9.80	1.76	5' CI	10.0	
C1A	0.04	0.90	10	9.80	0.35	-	-	SHEET FLOW TO BASIN C2B
C1B	0.18	0.90	10	9.80	1.59	5' CI	10.0	
D	1.85	0.35	20	8.30	5.37		-	OFF-SITE FLOW TO CULVERT
E1A	0.01	0.90	10	9.80	0.09	-	-	SHEET FLOW TO BASIN E1B
E1B	0.04	0.90	10	9.80	0.35	-	-	SHEET FLOW TO IH-30 ROW
E2	0.37	0.90	10	9.80	3.26	-	-	SHEET FLOW TO IH-30 ROW

RECORD DRAWING DATE 06-26-17

CITY BENCHMARK: CITY OF ROCKWALL CONTROL MONUMENT (3 INCH BRASS CAP SET IN CONCRETE) IN THE MEDIAN OF SUMMIT RIDGE DRIVE AT THE INTERSECTION OF SUMMIT RIDGE DRIVE & F.M. 740 (RIDGE ROAD).

- BOULEVARD & INTERSTATE 30 WESTBOUND FRONTAGE ROAD.
- 2. "X" CUT ON THE HEADWALL OF AN 18" RCP LOCATED BETWEEN THE WESTBOUND FRONTAGE ROAD AND MAIN LANES OF INTERSTATE 30 AT GREENCREST
- 3. IRON ROD SET WITH A YELLOW PLASTIC CAP STAMPED "ADAMS SURVEYING 5610" NEAR THE NORTHEAST CORNER OF THE PROPOSED SUBJECT TRACT.
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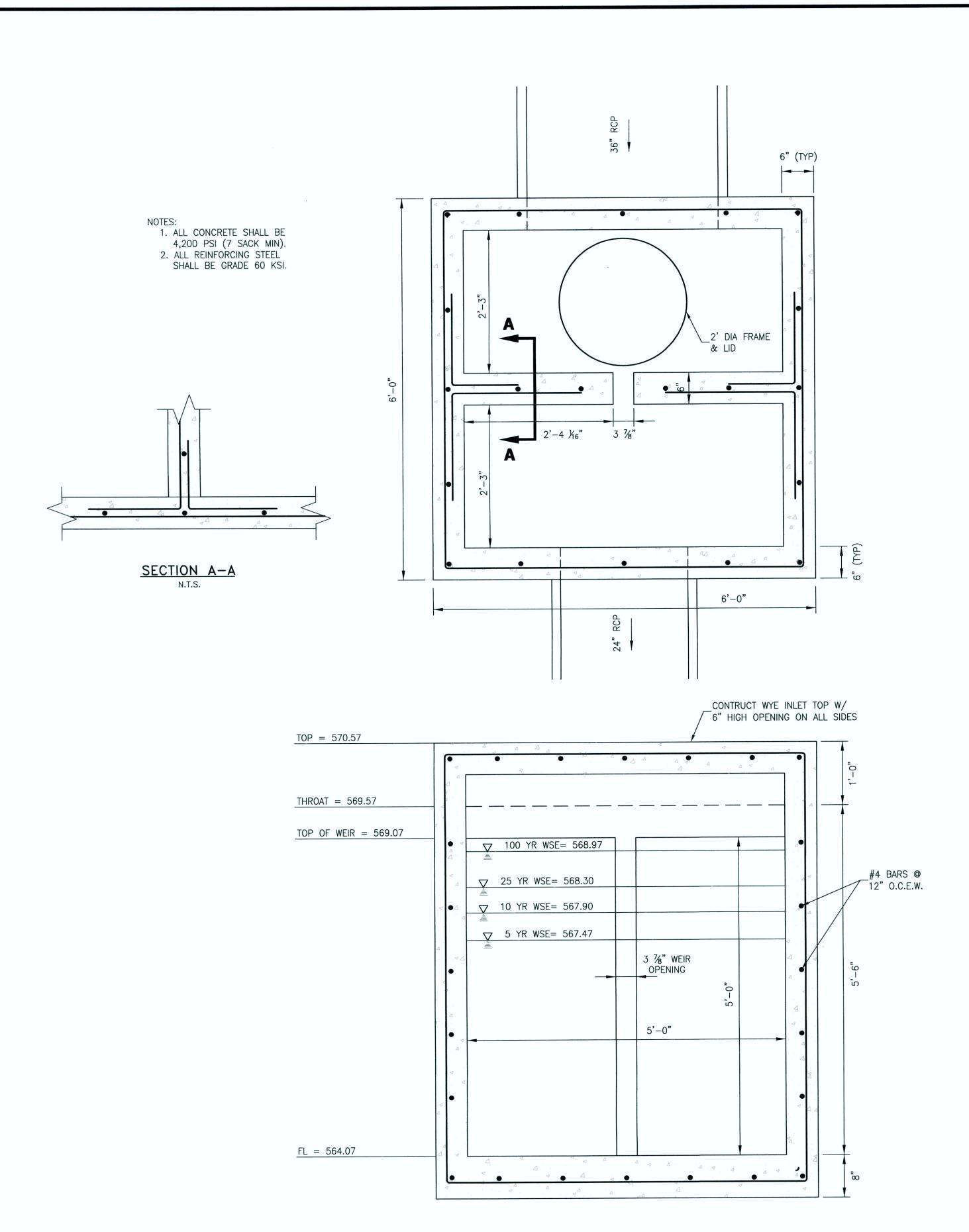
DRAINAGE AREA MAP

ROOMS TO GO

N.E.Q. I.H. 30 & GREENCREST BOULEVARD

THE CITY OF ROCKWALL, TEXAS

(CATE	s-CL	.ARK	1 48	300 Quorum Dri Dallas, Texas 972.385.2 TBPE F-3	75254 272
ESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
CCA	CCA	02/22/16	1"=40'	ASC	112-009 DA MAP	C5.1



100 YEAR DETENTION CALCULATIONS

1. BASED ON THE CITY OF ROCKWALL "STANDARD OF DESIGN AND CONSTRUCTION (AUGUST 2003)" AND AMENDMENTS THERETO.

TOTAL DRAINAGE AREA BEING DETAINED FOR IS 3.71 ACRES. (BASINS A1A - A4, B1B, B1C, B2B, B3B, B4B, B5B, B6 - B12, C1A - C1B, E1A - E2)

3. ALLOWABLE RELEASE RATE

TIME OF CONCENTRATION = 20 min UNDEVELOPED FLOW FROM SITE AREAS BEING DETAINED FOR:

= C * I * A = 0.35 * 8.3 * 3.71 = 10.78 cfs

FULLY RELEASED (UNDETAINED) DEVELOPED FLOW:

= BASINS E1A - E2 = C * I * A = 0.90 * 9.8 * 0.42 = 3.70 cfs

UNDEVELOPED FLOW FROM OFFSITE THROUGH DETENTION SYSTEM (NOT BEING DETAINED FOR):

= BASINS B1A, B2A, B3A, B4A, B5A = C * I * A = 0.35 * 8.3 * 1.53 = 4.44 cfs

TOTAL ALLOWABLE RELEASE RATE: = UNDEVELOPED ONSITE - UNDETAINED ONSITE + UNDETAINED OFFSITE

= 10.78 - 3.70 + 4.44 = 11.52 cfs

4. STORAGE REQUIRED

CONTRIBUTING AREA = 4.79 ac

ALLOWABLE STORMWATER FLOW FROM DETENTION = 11.52 cfs PROPOSED COEFFICIENT OF RUNOFF (C) = 0.73

BASINS B1A, B2A, B3A, B4A, B5A: A = 1.50 ac, C = 0.35

BASINS A1A - A4, B1B, B1C, B2B, B3B, B4B, B5B, B6 - C1B: A = 3.29 ac, C = 0.90

C = (1.50 * 0.35 + 3.29 * 0.90) / 4.79 = 0.73

TIME OF CONCENTRATION (min) = 10

DURATION	I - 100 YR	С	AREA	FLOW	INFLOW	OUTFLOW	STORAGE	
(MIN)	(IN/ _{HR})		(ACRES)	(CFS)	(FT ³)	(FT ³)	(FT ³)	
10	9.8	0.73	4.79	34.27	20,561	6,912	13,649	_
20	8.3	0.73	4.79	29.02	34,827	10,368	24,459	
30	6.9	0.73	4.79	24.13	43,429	13,824	29,605	
40	5.8	0.73	4.79	20.28	48,674	17,280	31,394	
50	5.0	0.73	4.79	17.48	52,451	20,736	31,715	
60	4.5	0.73	4.79	15.74	56,647	24,192	32,455	
70	4.0	0.73	4.79	13.99	58,745	27,648	31,097	
80	3.7	0.73	4.79	12.94	62,101	31,104	30,997	
90	3.5	0.73	4.79	12.24	66,088	34,560	31,528	
100	3.4	0.73	4.79	11.89	71,333	38,016	33,317	(0.76 A
110	3.2	0.73	4.79	11.19	73,850	41,472	32,378	

5. DETENTION VOLUME:

PROVIDED DETENTION VOLUME =

54" PIPE (PER SHEET C6.2) = 31,762 ft³ 1,271 ft³ 259 LF 30" PIPE (LN B) = 124 LF 24" PIPE (LN B) = 389 ft³

TOTAL STORAGE = 33,422 ft³

MINIMUM WATER SURFACE ELEVATION = HIGHEST INVERT (TOP OF PIPE) OF REQUIRED DETENTION PIPE

= 568.95

6. OUTFALL DESIGN - RECTANGULAR WEIR

 Q_{100} ALLOWABLE RELEASE = 11.52 cfs MIN. WATER SURFACE (WSE) = 568.95 POND FLOWLINE @ OUTLET (OE) = 564.07

 $Q = CLH^{1.5}$ WHERE C = 3.32 $Q_{100} = CLH^{1.5} = 11.52 \text{ cfs}$

HEAD, H = WSE - OE = 4.88 ftWIDTH, $L = Q/CH^{1.5} = 0.32$ ft

CONSTRUCTED WEIR WIDTH, L = 0.32 ft $(3^{7}/8")$

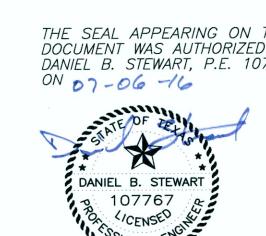
 $Q = CLH^{1.5} \longrightarrow H = (Q/CL)^{-1.5}$

H = 4.90 ft v = Q/A = 7.35 $ft/_{sec}$

100 YR WSE = 568.97 ft

DETENTION RELEASE ANALYSIS							
STORM EVENT (years)	ALLOWABLE RELEASE (cfs)	CALCULATED RELEASE (cfs)	DETENTION DEPTH (ft)	REQUIRED VOLUME (ft ³)	CALCULATED VOLUME (ft³)		
100	11.52	11.52	4.90	33,317	33,422		
25	9.23	9.23	4.23	25,346	31,579		
10	7.96	7.96	3.83	21,628	28,999		
5	6.67	6.67	3.40	18,722	25,389		

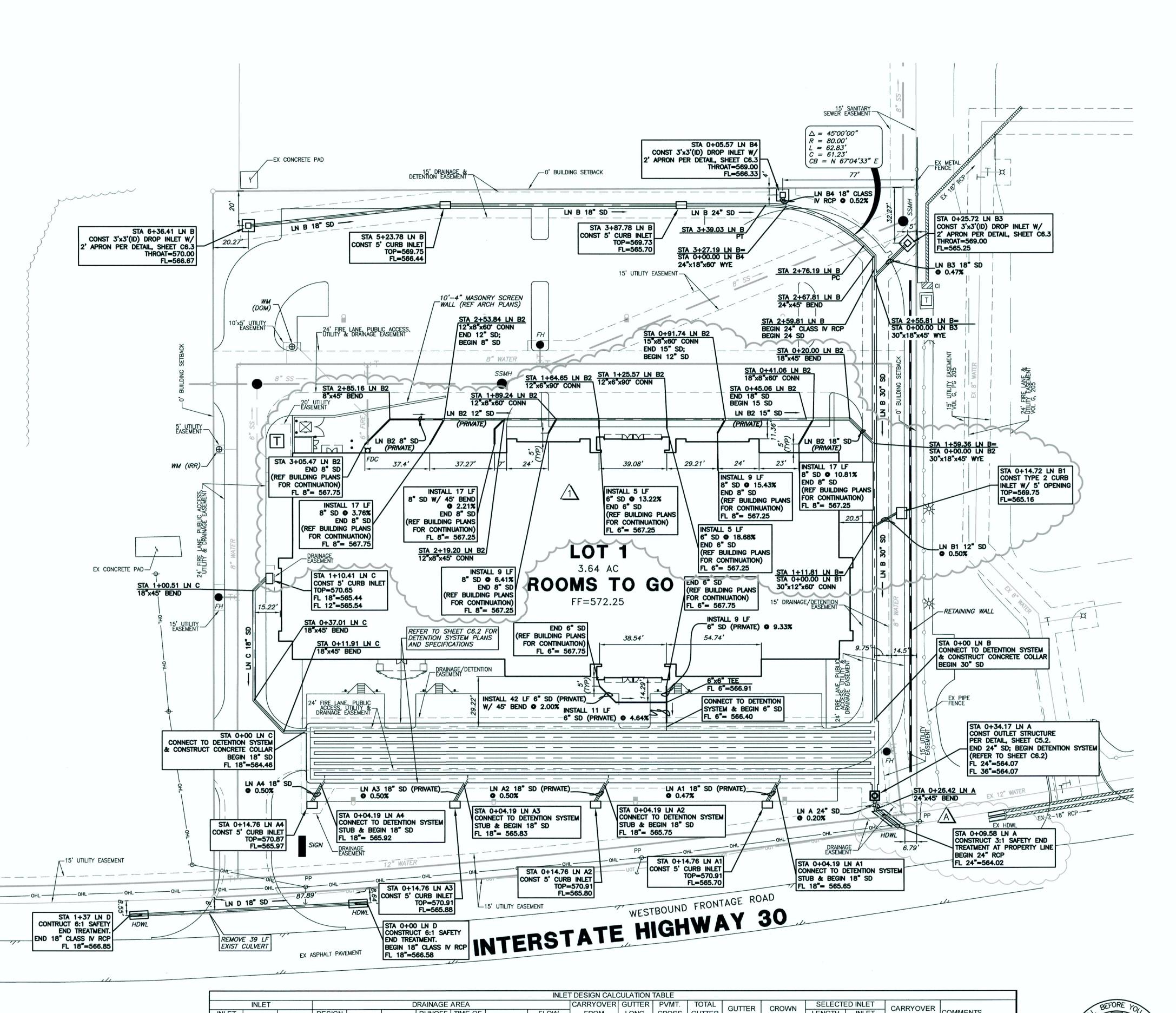
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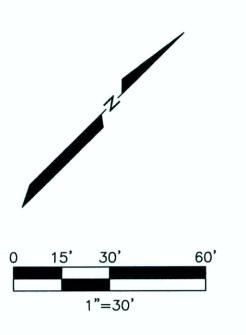


THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY DANIEL B. STEWART, P.E. 107767

1 07 REV.	7/06/16 DATE	UPDAT REMAR		BASIN LABE	LS					
DET	DETENTION DETAILS & CALCULATIONS									
	ROOMS TO GO									
	N.E.Q. I.H. 30 & GREENCREST BOULEVARD									
	THE CITY OF ROCKWALL, TEXAS									
	CATES-CLARK 14800 Quorum Drive, Suite 200 Dallas, Texas 75254 972.385.2272 TBPE F-3751									
DESIG	N DR	AWN	DATE	SCALE	NOTES	FILE	NO.			
CCA	c	CA	02/22/16	AS SHOWN	ASC	112-009 DETENTION DET	C5.2			

OUTLET CONTROL DETAIL





STORM DRAIN GENERAL NOTES

- 1. STANDARDS AND SPECIFICATIONS: ALL MATERIALS, CONSTRUCTION METHODS, WORKMANSHIP, EQUIPMENT, SERVICES AND TESTING FOR ALL PUBLIC IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' ORDINANCES, REGULATIONS, REQUIREMENTS, STATUTES, SPECIFICATIONS AND DETAILS, LATEST PRINTING AND AMENDMENTS THERETO. ALL PRIVATE CONSTRUCTION, NOT REGULATED BY THE GOVERNING AUTHORITY, SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, LATEST PRINTING AND AMENDMENTS THERETO, EXCEPT AS MODIFIED BY THE PROJECT CONTRACT DOCUMENTS.
- 2. TRENCH SAFETY: THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE TRENCH SAFETY DURING ALL PHASES OF CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A TRENCH SAFETY SYSTEM PLAN PREPARED IN ACCORDANCE WITH OSHA REQUIREMENTS BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS FOR THE IMPLEMENTATION OF TRENCH SAFETY CONTROL MEASURES THAT WILL BE IN EFFECT DURING THE CONSTRUCTION OF THE PROJECT FOR ALL TRENCHES DEEPER THAN FIVE (5) FEET.
- 3. LOCATION OF EXISTING UTILITIES: THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND SHALL NOTIFY THE CONSTRUCTION MANAGER AND ENGINEER OF ANY CONFLICTS DISCOVERED. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN) WITHIN THE AREA OF CONSTRUCTION.
- 4. PROTECTION OF EXISTING UTILITIES: THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS FOR THE SUPPORT AND PROTECTION OF ALL EXISTING UTILITIES (POLES, LINES, CABLES, STRUCTURES, ETC.) LOCATED BOTH ABOVE AND BELOW THE GROUND
- 5. LOCATION OF PROPOSED DRAINAGE IMPROVEMENTS: THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING
- 6. PUBLIC STORM DRAIN PIPE: UNLESS OTHERWISE NOTED ON THE PLANS, ALL PIPE FOR STORM DRAIN IMPROVEMENTS IS PUBLIC AND SHALL BE REINFORCED CONCRETE PIPE (RCP), CLASS III.
- 7. PRIVATE STORM DRAIN PIPE: UNLESS OTHERWISE NOTED ON THE PLANS, ALL PIPES FOR PRIVATE STORM DRAIN IMPROVEMENTS SHALL BE AS FOLLOWS:
- a. 18" AND GREATER: REINFORCED CONCRETE PIPE (RCP), CLASS III.

THE STORM SEWER.

- b. 3" THROUGH 15": PVC SCHEDULE 40, SDR-35, OR HIGH DENSITY POLYETHYLENE PIPE (HDPE), N-12.
- 8. EMBEDMENT: EMBEDMENT FOR STORM DRAINAGE PIPE, PUBLIC AND PRIVATE, SHALL BE IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' STANDARD DETAILS.
- 9. BENDS & WYES: PREFABRICATED BENDS AND WYES SHALL BE USED ON ALL PIPE CONNECTIONS AND JUNCTIONS
- 10. GROUTING: ALL PIPE ENTERING PUBLIC STORM DRAIN STRUCTURES SHALL BE GROUTED TO ASSURE WATER TIGHT CONNECTIONS.
- 11. CONCRETE COLLARS: CONCRETE COLLARS SHALL BE INSTALLED AT ALL CHANGES IN CONDUIT SIZE AND AT ALL JOINTS THAT ARE PULLED IN EXCESS OF THAT RECOMMENDED BY THE CONDUIT MANUFACTURER.
- 12. ROOF DRAINS: THE CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ROOF DRAIN LATERALS WITH THE BUILDING PLANS FOR DOWNSPOUT CONNECTIONS.
- 13. STORM DRAINAGE STRUCTURES: STORM DRAINAGE STRUCTURES (INLETS, JUNCTION BOXES, ETC.) ON PUBLIC LINES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH GOVERNING AUTHORITIES' STANDARD DETAILS. UNLESS OTHERWISE NOTED, STRUCTURES ON PRIVATE LINES ARE TO BE PRECAST STRUCTURES MANUFACTURED BY HANSON, OR APPROVED EQUIVALENT.
- 14. ADJUSTMENT OF STRUCTURES: ALL STORM DRAIN STRUCTURES INCLUDING MANHOLES, INLETS AND CLEANOUTS MUST BE ADJUSTED TO PROPER LINE AND GRADE BY THE CONTRACTOR TO MATCH THE FINISHED GRADE.
- 15. PRIVATE CURB INLETS: PRIVATE CURB INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' STANDARD DETAILS, HANSON PRECAST PRODUCTS OR APPROVED EQUIVALENT.

BENCHMARKS:

- CITY BENCHMARK: CITY OF ROCKWALL CONTROL MONUMENT (3 INCH BRASS CAP SET IN CONCRETE) IN THE MEDIAN OF SUMMIT RIDGE DRIVE AT THE INTERSECTION OF SUMMIT RIDGE DRIVE & F.M. 740 (RIDGE ROAD). PUBLISHED ELEV= 578.63'
- SITE BENCHMARK

 1. "X" CUT ON SIDEWALK AT THE NORTHWEST CORNER OF GREENCREST
 BOULEVARD & INTERSTATE 30 WESTBOUND FRONTAGE ROAD.
 ELEVATION= 569.21'
- 2. "X" CUT ON THE HEADWALL OF AN 18" RCP LOCATED BETWEEN THE WESTBOUND FRONTAGE ROAD AND MAIN LANES OF INTERSTATE 30 AT GREENCREST BOULEVARD. ELEVATION= 568.84'
- 3. IRON ROD SET WITH A YELLOW PLASTIC CAP STAMPED "ADAMS SURVEYING 5610"
 NEAR THE NORTHEAST CORNER OF THE PROPOSED SUBJECT TRACT.
- ELEVATION= 569.60'

 4. IRON ROD SET WITH A YELLOW PLASTIC CAP STAMPED "ADAMS SURVEYING 5610"
 NEAR THE SOUTHEAST CORNER OF THE PROPOSED SUBJECT TRACT.
- ELEVATION= 564.60'

RECORD DRAWING
DATE CO-26-17

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY DANIEL B. STEWART, P.E. 107767

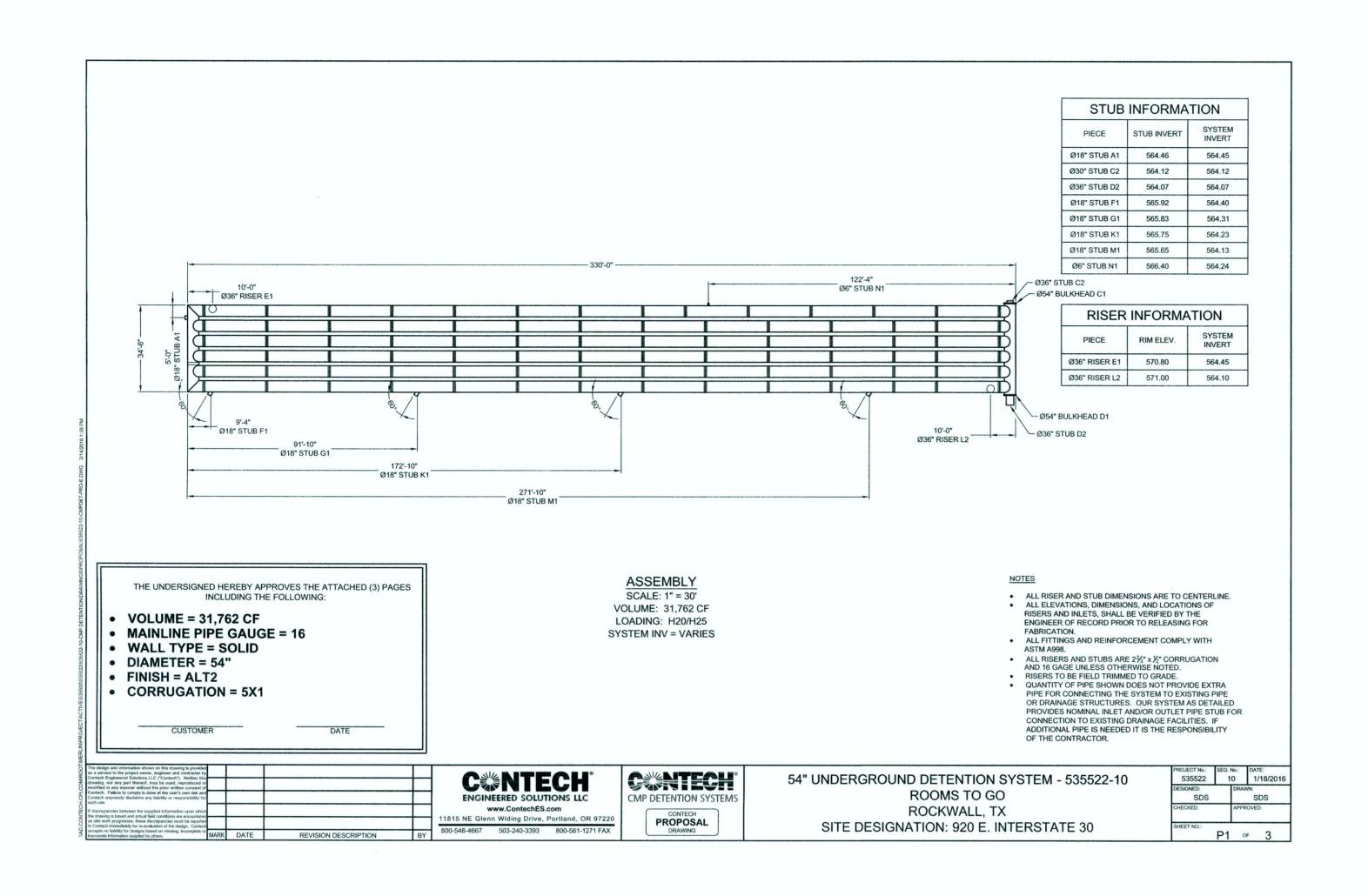


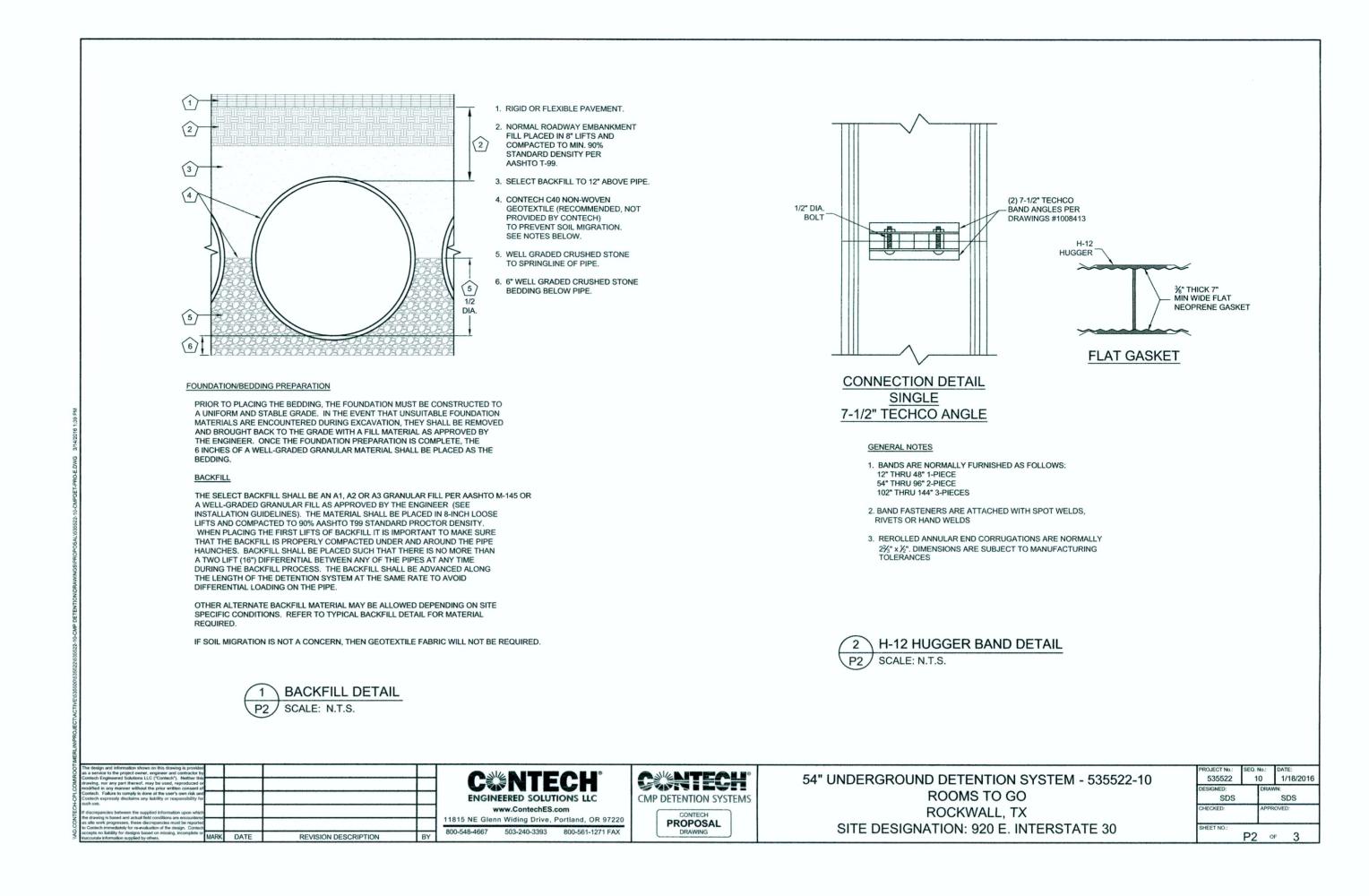
REFER TO SHEET C7.1 FOR STORM DRAIN PIPE DESIGN CALCULATIONS.

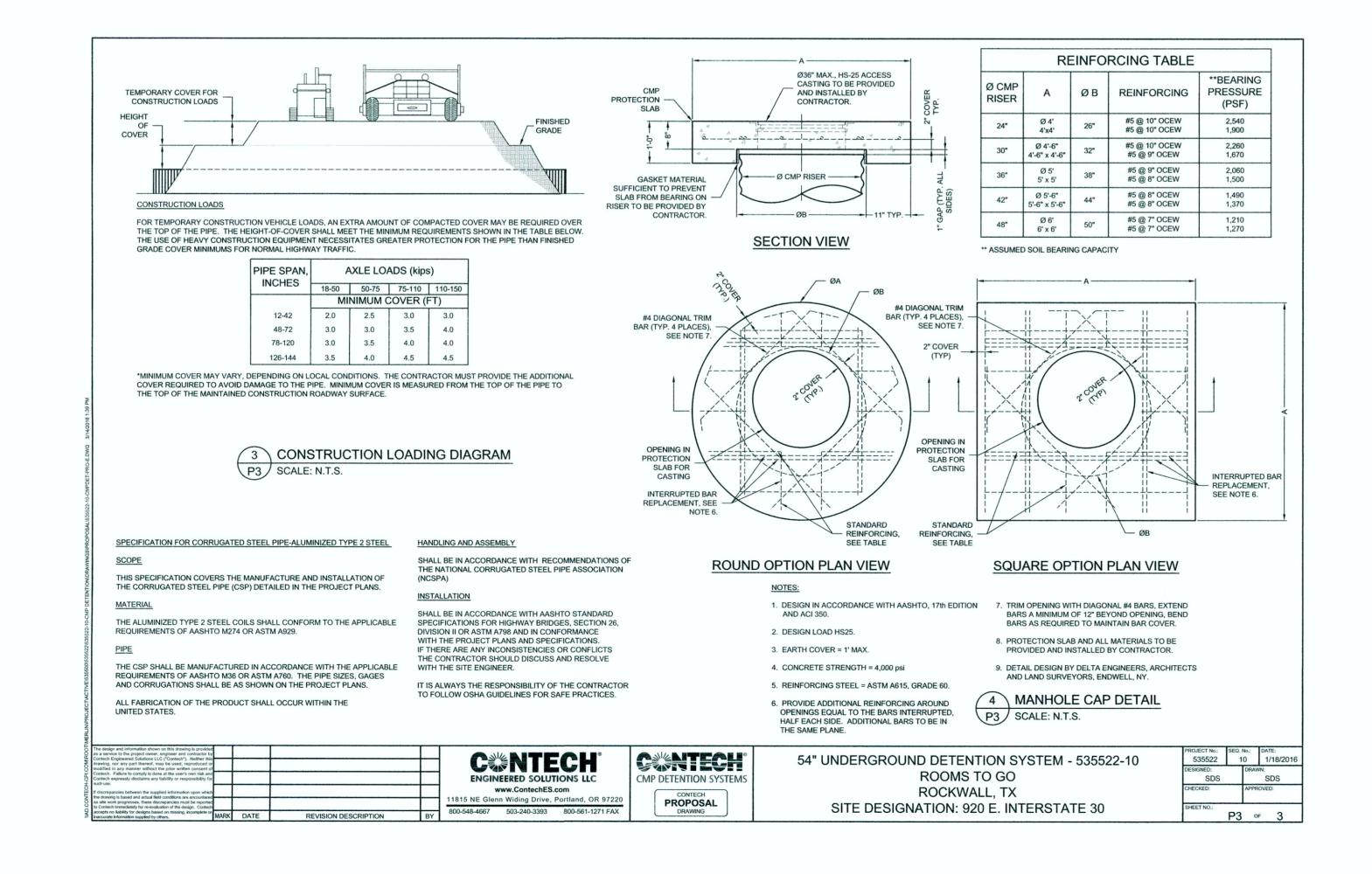
ADDED "PRIVATE" LABELS TO LN B2 REVISE LINE B1 & B2; REMOVE ROOF DRAIN ON LINE C RELOCATE SAFETY END TREATMENT ON LINE A & REMOVE RIP RAP STORM DRAIN PLAN ROOMS TO GO N.E.Q. I.H. 30 & GREENCREST BOULEVARD THE CITY OF ROCKWALL, TEXAS 14800 Quorum Drive, Suite 200 Dallas, Texas 75254 972.385.2272 TBPE F-3751 DESIGN | DRAWN | DATE | SCALE | NOTES FILE NO. 112-009 C6.1 CCA CCA 02/22/16 1"=30' ASC STORM DRAIN

CARRYOVER COMMENTS LENGTH LONG. CROSS GUTTER DESIGN **TYPE** DOWNSTREAM SD LINE STATION INTENSITY CAPACITY BASIN STORM CONC. RATE UPSTREAM SLOPE SLOPE **FLOW** PROVIDED **TYPE** "C" (min) (cfs) (cfs) (cfs) ("/_{hr}) (cfs) (cfs) (acres) 0.00 B1A-B10 0.61 0.00 WEIGHTED C VALU 100 B2A-B2B 4.98 0.00 4.98 0.00 WEIGHTED C VALUE 0.78 8.3 0.0100 0.0185 29.00 TRIAN GUT 100 B3A-B3B 0.72 4.12 0.00 0.0100 30.00 TRIAN GUT 0.00 WEIGHTED C VALUE 4.12 1.20 0.00 WEIGHTED C VALUE 100 B4A-B4B 0.39 20 8.3 0.00 1.20 B3 0+25.72 100 B5A-B5B 0.87 0.47 20 8.3 3.39 0.00 3.39 0.00 WEIGHTED C VALUE 9.8 B1 0+14.72 100 B12 0.20 0.9 10 1.76 0.00 0.0100 1.76 24.00 TRIAN GUT 0.00 0.0200 0.00 C 1+10.41 100 C2A-C2B 0.22 0.9 10 9.8 1.94 0.00 0.0100 0.0100 1.94 51.00 TRIAN GUT

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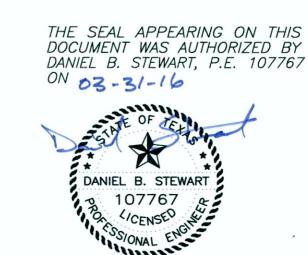






RECORD DRAWING DATE 06-26-17

THE DETAILS ON THIS SHEET HAVE BEEN PROVIDED BY THE SHOWN MANUFACTURER SPECIFICALLY FOR THIS PROJECT.



REV. DATE REMARKS **DETENTION SYSTEM DETAILS** ROOMS TO GO N.E.Q. I.H. 30 & GREENCREST BOULEVARD

02/22/16

CCA

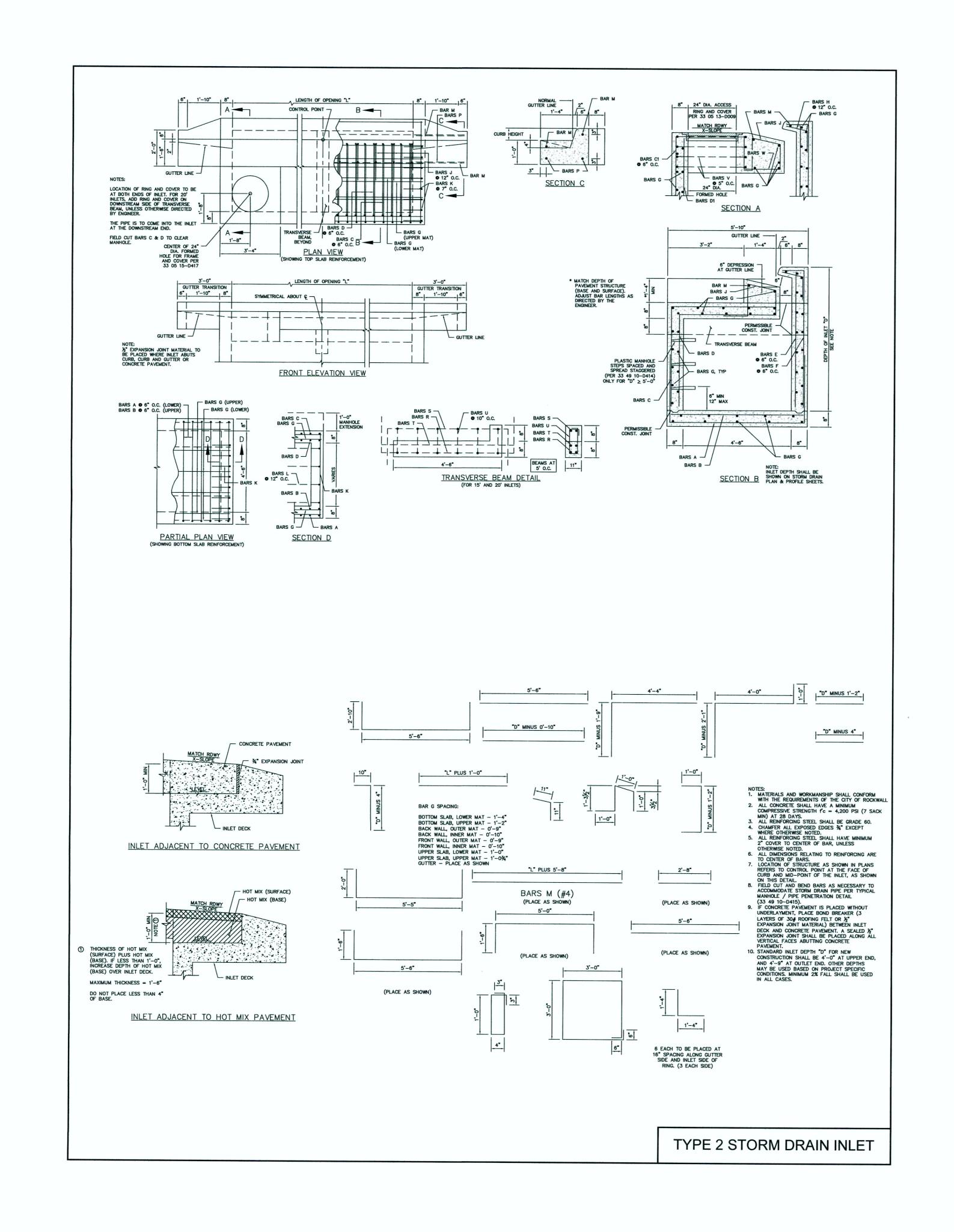
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THE CITY OF ROCKWALL, TEXAS DRAWN DATE SCALE NOTES FILE NO. 112-009 DETENTION DET

ASC

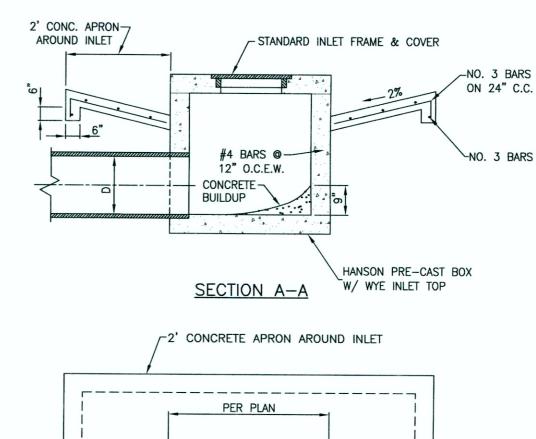
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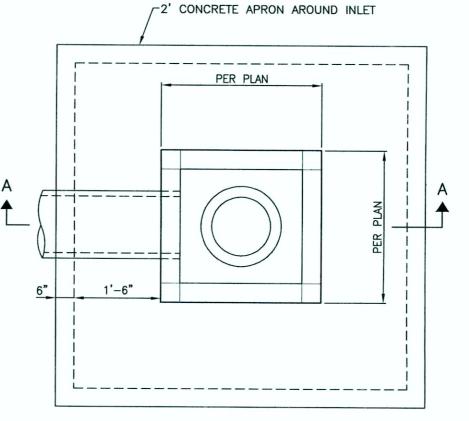




NOTES:

- PIPE MAY BE PLACED IN ANY WALL BUT SHALL NOT ENTER ANY CORNER OR BOTTOM.
- CONCRETE TO BE MINIMUM OF 4200 PSI (7 SACK MIN).





DROP INLET APRON

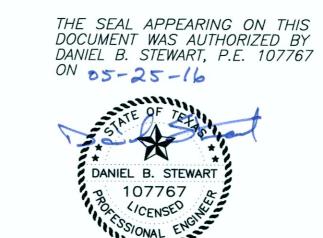
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RECORD DRAWING
DATE 06-26-17

FILE

112-009 STORMDET NO.

C6.3



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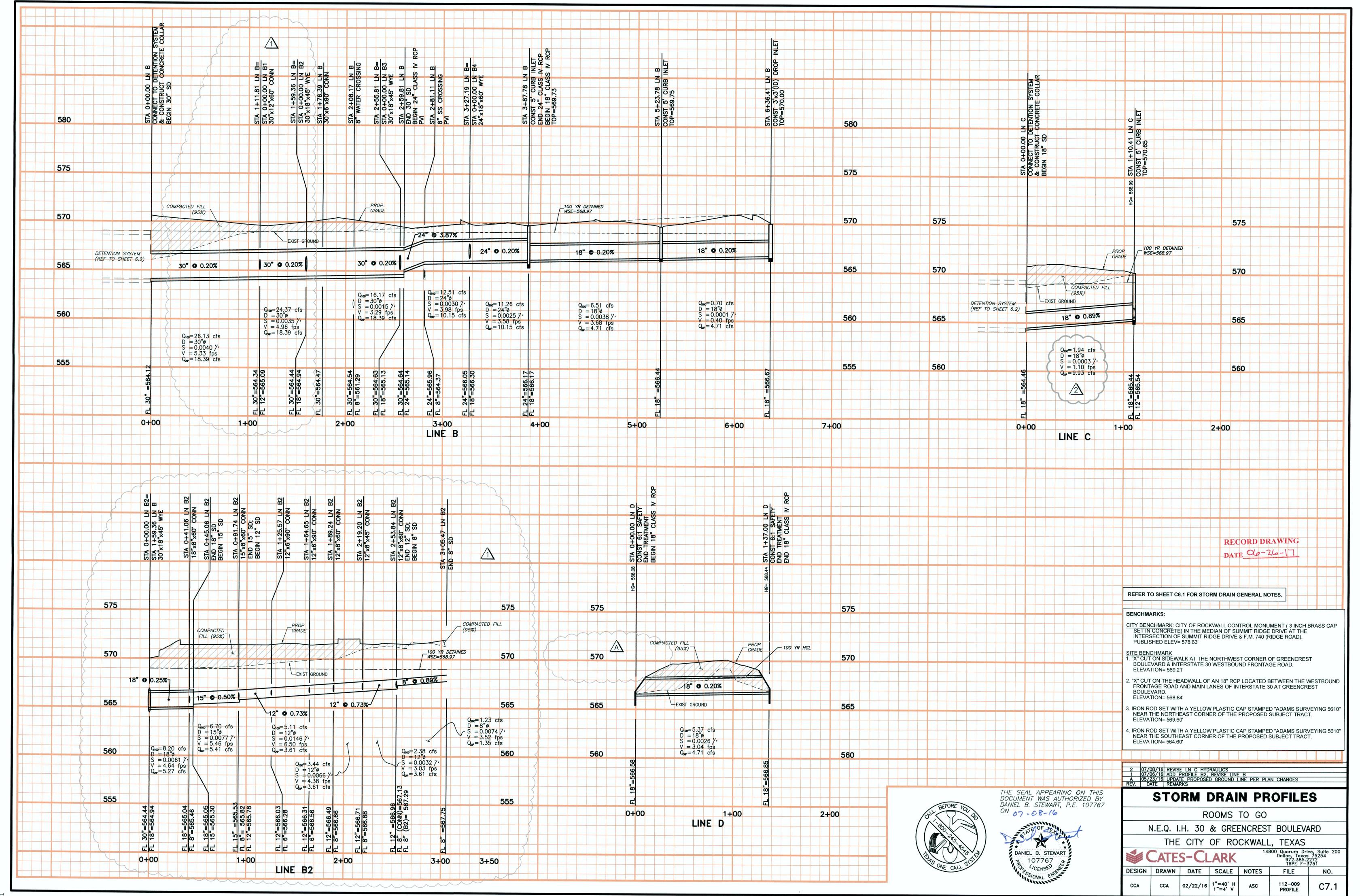
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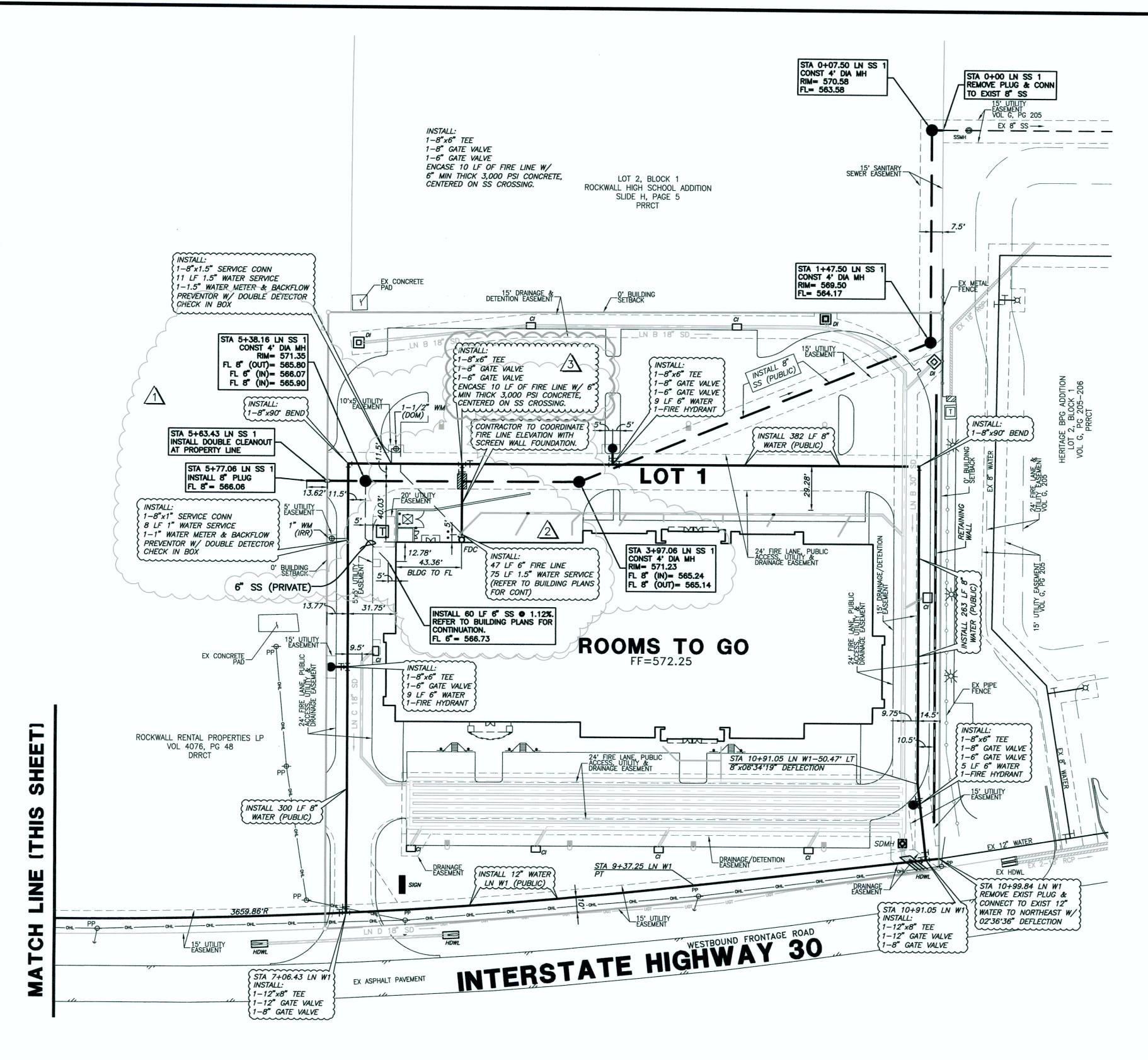
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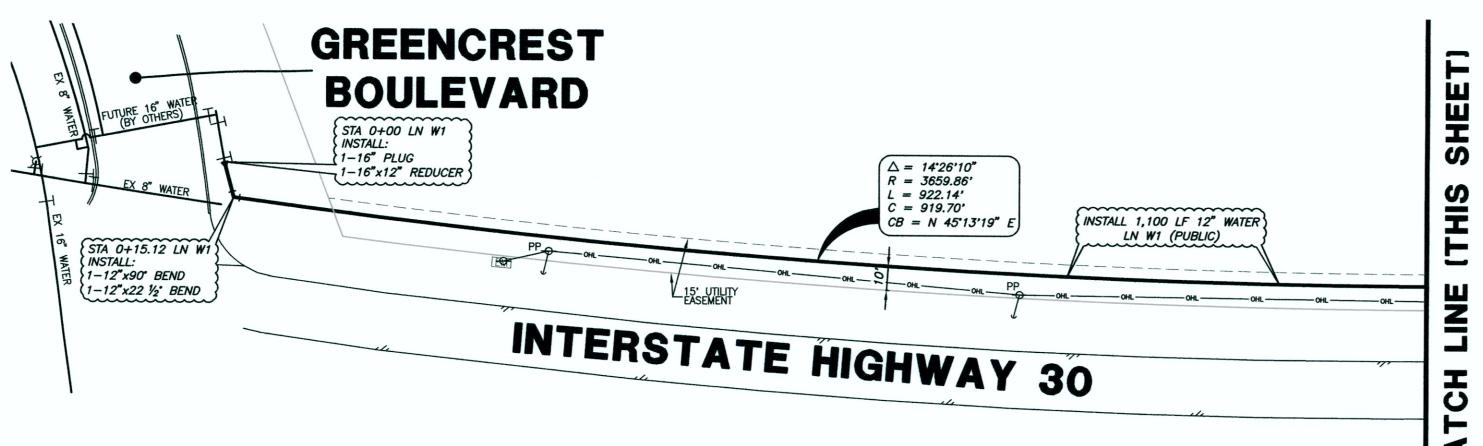
 N.E.Q. 1.H. 30	& GREENCRESI	BUULEVARD
THE CITY	OF ROCKWALL	., TEXAS
CATES-CI	LARK 148	300 Quorum Drive, Suite 200 Dallas, Texas 75254 972.385.2272 TBPE F-3751

ASC

NTS







WATER GENERAL NOTES

- 1. STANDARDS AND SPECIFICATIONS: ALL MATERIALS, CONSTRUCTION METHODS, WORKMANSHIP, EQUIPMENT, SERVICES AND TESTING FOR ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' ORDINANCES, REGULATIONS, REQUIREMENTS, STATUTES, SPECIFICATIONS AND DETAILS, LATEST PRINTING AND AMENDMENTS THERETO, UNLESS OTHERWISE NOTED.
- 2. TRENCH SAFETY: THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE TRENCH SAFETY DURING ALL PHASES OF CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A TRENCH SAFETY SYSTEM PLAN PREPARED IN ACCORDANCE WITH OSHA REQUIREMENTS BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS FOR THE IMPLEMENTATION OF TRENCH SAFETY CONTROL MEASURES THAT WILL BE IN EFFECT DURING THE CONSTRUCTION OF THE PROJECT FOR ALL TRENCHES DEEPER THAN FIVE (5) FEET.
- 3. LOCATION OF EXISTING UTILITIES: THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND SHALL NOTIFY THE CONSTRUCTION MANAGER AND ENGINEER OF ANY CONFLICTS DISCOVERED. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILTIES (SHOWN OR NOT SHOWN) WITHIN THE AREA OF CONSTRUCTION. ALL EXISTING UTILITY APPURTENANCES SHALL BE ADJUSTED TO FINAL GRADE AND/OR PAVEMENT ELEVATION.
- 4. PROTECTION OF EXISTING UTILITIES: THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS FOR THE SUPPORT AND PROTECTION OF ALL EXISTING UTILITIES (POLES, LINES, CABLES, STRUCTURES, ETC.) LOCATED BOTH ABOVE AND BELOW THE GROUND.
- 5. MAINTENANCE BOND: UPON ACCEPTANCE OF THE PUBLIC IMPROVEMENTS BY THE GOVERNING AUTHORITY, THE CONTRACTOR SHALL FURNISH A MAINTENANCE BOND TO THE GOVERNING AUTHORITY IN ACCORDANCE WITH THEIR STANDARD FORM.
- 6. RECORD PLANS: THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF THE INSTALLATION OF ALL WATER LINES, FIRE HYDRANTS, VALVES, SERVICES, ETC. THE CONTRACTOR SHALL PROVIDE A COPY OF THE RECORDS TO THE ENGINEER FOR PREPARATION OF THE "RECORD DRAWING" PLANS FOR SUBMITTAL TO THE GOVERNING AUTHORITY PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.
- 7. WATER MAINS: ALL WATER MAINS SHALL BE PVC AWWA C900 DR 14, CLASS 200, UNLESS NOTED OTHERWISE.
- 8. COVER OVER PIPE: THERE SHALL BE A MINIMUM COVER OF 42" FROM THE TOP OF THE PIPE TO THE EXISTING GROUND OR THE PROPOSED FINISHED GRADE, WHICHEVER IS GREATER.

9. THRUST BLOCK: ALL BENDS SHALL BE RESTRAINED WITH THRUST

BLOCK IN ACCORDANCE WITH THE GOVERNING AUTHORITIES'

- STANDARD SPECIFICATIONS AND DETAILS. 10. TRENCHES: TRENCHES SHALL BE BACKFILLED WITH MATERIAL IN
- ACCORDANCE WITH THE GOVERNING AUTHORITIES' STANDARD SPECIFICATIONS AND DETAILS.
- 11. SEPARATION FROM SANITARY SEWER: WATER LINES SHALL BE PLACED NO CLOSER THAN 9 FEET TO SANITARY SEWER LINES IN COMPLIANCE WITH T.C.E.Q. REQUIREMENTS.
- 12. VALVES: VALVES SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' STANDARDS AND SPECIFICATIONS.
- 13. FIRE HYDRANTS: FIRE HYDRANTS SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH GOVERNING AUTHORITIES' STANDARDS AND SPECIFICATIONS.
- 14. METERS: METERS AND METER BOXES SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' STANDARDS AND SPECIFICATIONS. THE METER BOX SHALL BE INSTALLED IN NON-TRAFFIC AREAS AND PROTECTED BY 6" CURB OR BOLLARDS. THE METER BOX SHALL BE INSTALLED AFTER THE PAVING CONTRACTOR HAS COMPLETED THE FINE GRADING BEHIND THE BACK OF THE CURB. EACH SERVICE LOCATION SHALL BE MARKED ON THE PAVEMENT OR CURB WITH A BLUE DOT AND TIED TO THE PROPERTY CORNERS ON THE "RECORD DRAWINGS".
- 15. WATER SERVICES: THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF WATER SERVICES WITH THE BUILDING PLANS.
- 16. TESTING AND STERILIZATION: ALL WATER LINES AND APPURTENANCES SHALL BE STERILIZED AND TESTED IN ACCORDANCE WITH GOVERNING AUTHORITIES' SPECIFICATIONS FOR ACCEPTANCE.
- 17. MARKERS: CONTRACTOR TO INSTALL BLUE EMS DISKS ON THE WATER LINES AT EVERY CHANGE IN DIRECTION, VALVE, FIRE HYDRANT AND SERVICE CONNECTION.

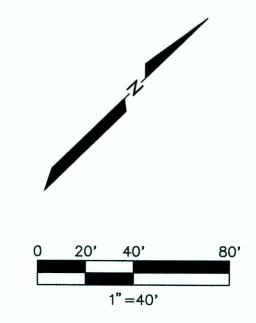
FIRE LINE GENERAL NOTE

UNDERGROUND WATER SUPPLY SERVING AN AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE PERMITTED AND INSTALLED IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' REQUIREMENTS. THE FIRE LINE SYSTEM SHALL IN INSTALLED BY A TEXAS LICENSED FIRE SPRINKLER CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING THE PERMIT APPLICATION AND PLANS TO THE GOVERNING AUTHORITY FOR APPROVAL AND PERMIT PRIOR TO INSTALLATION OF THE FIRE LINE(S).



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY DANIEL B. STEWART, P.E. 107767 ON 06 - 26-17





SANITARY SEWER GENERAL NOTES

- 1. STANDARDS AND SPECIFICATIONS: ALL MATERIALS, CONSTRUCTION METHODS, WORKMANSHIP, EQUIPMENT, SERVICES AND TESTING FOR ALL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' ORDINANCES, REGULATIONS, REQUIREMENTS, STATUTES, SPECIFICATIONS AND DETAILS, LATEST PRINTING AND AMENDMENTS THERETO, UNLESS OTHERWISE NOTED.
- 2. TRENCH SAFETY: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE A TRENCH SAFETY SYSTEM PLAN PREPARED IN ACCORDANCE WITH OSHA REQUIREMENTS BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS FOR THE IMPLEMENTATION OF TRENCH SAFETY CONTROL MEASURES THAT WILL BE IN EFFECT DURING THE CONSTRUCTION OF THE PROJECT.
- 3. PROTECTION OF EXISTING UTILITIES: THE CONTRATOR SHALL MAKE NECESSARY PROVISIONS FOR THE SUPPORT AND PROTECTION OF ALL EXISTING UTILITIES (POLES, LINES, CABLES, STRUCTURES, ETC.) LOCATED BOTH ABOVE AND BELOW THE GROUND.
- 4. MAINTENANCE BOND: UPON ACCEPTANCE OF THE PUBLIC IMPROVEMENTS BY THE GOVERNING AUTHORITY, THE CONTRACTOR SHALL FURNISH A MAINTENANCE BOND TO THE GOVERNING AUTHORITY IN ACCORDANCE WITH THEIR STANDARD FORM.
- 5. RECORD PLANS: THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF THE INSTALLATION OF ALL SANITARY SEWER LINES. MANHOLES, SERVICES, ETC. THE CONTRACTOR SHALL PROVIDE A COPY OF THE RECORDS TO THE ENGINEER FOR PREPARATION OF THE "RECORD DRAWING" PLANS FOR SUBMITTAL TO THE GOVERNING AUTHORITY PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS.
- 6. SANITARY SEWER MAINS: ALL SANITARY SEWER MAINS SHALL BE PVC SDR 35, ASTM D 3034, UNLESS NOTED OTHERWISE.
- 7. TRENCHES: TRENCHES SHALL BE BACKFILLED WITH MATERIAL IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' STANDARD SPECIFICATIONS AND DETAILS.
- 8. WATER CROSSINGS: ALL SANITARY SEWER MAINS SHALL HAVE ONE (1) 20-FOOT JOINT CENTERED ON EITHER SIDE OF WATER MAINS WHERE A CROSSING OCCURS.
- 9. DEBRIS: SANITARY SEWER LINES SHALL BE KEPT CLEAR OF BROKEN CONCRETE, DIRT OR ANY OTHER DEBRIS RESULTING FROM CONSTRUCTION OPERTATIONS.
- 10. SANITARY SEWER SERVICES: THE CONTRACTOR SHALL VERIFY THE SIZE AND THE EXACT LOCATION OF SANITARY SEWER SERVICES WITH THE BUILDING PLANS. THE CONTRACTOR SHALL TIE A 1" WIDE PIECE OF RED PLASTIC FLAGGING TO THE END OF EACH SEWER SERVICE AND SHALL LEAVE A MINIMUM OF 36" OF FLAGGING EXPOSED AFTER BACKFILL. AFTER CURB AND PAVING IS COMPLETED, THE CONTRACTOR SHALL MARK THE LOCATION OF THE SEWER SERVICE ON THE CURB IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' SPECIFICATIONS.
- 11. TESTING: ALL SANITARY SEWER LINES AND APPURTENANCES SHALL BE TESTED IN ACCORDANCE WITH THE GOVERNING AUTHORITIES' SPECIFICATIONS FOR ACCEPTANCE.
- 12. SANITARY SEWER MANOLES: ALL MANHOLES TO BE SEALED AND RAVEN LINED OR APPROVED EQUAL.
- 13. MARKERS: CONTRACTOR TO INSTALL GREEN EMS DISKS ON THE SEWER LINE AT EVERY CHANGE IN DIRECTION, MANHOLE, CLEANOUT AND SERVICE CONNECTION.

BENCHMARKS:

CITY BENCHMARK: CITY OF ROCKWALL CONTROL MONUMENT (3 INCH BRASS CAP SET IN CONCRETE) IN THE MEDIAN OF SUMMIT RIDGE DRIVE AT THE INTERSECTION OF SUMMIT RIDGE DRIVE & F.M. 740 (RIDGE ROAD). PUBLISHED ELEV= 578.63'

. "X" CUT ON SIDEWALK AT THE NORTHWEST CORNER OF GREENCREST BOULEVARD & INTERSTATE 30 WESTBOUND FRONTAGE ROAD. ELEVATION= 569.21'

2. "X" CUT ON THE HEADWALL OF AN 18" RCP LOCATED BETWEEN THE WESTBOUND FRONTAGE ROAD AND MAIN LANES OF INTERSTATE 30 AT GREENCREST BOULEVARD. ELEVATION= 568.84'

. IRON ROD SET WITH A YELLOW PLASTIC CAP STAMPED "ADAMS SURVEYING 5610" NEAR THE NORTHEAST CORNER OF THE PROPOSED SUBJECT TRACT.

. IRON ROD SET WITH A YELLOW PLASTIC CAP STAMPED "ADAMS SURVEYING 5610" NEAR THE SOUTHEAST CORNER OF THE PROPOSED SUBJECT TRACT. ELEVATION= 564.60'

PER AS-BUILT CONDITIONS
FOR SS SERVICE; ADD CONCRETE ENCASEMENT; REVISE WATER SERVICE LAYOU

WATER & SANITARY SEWER PLAN

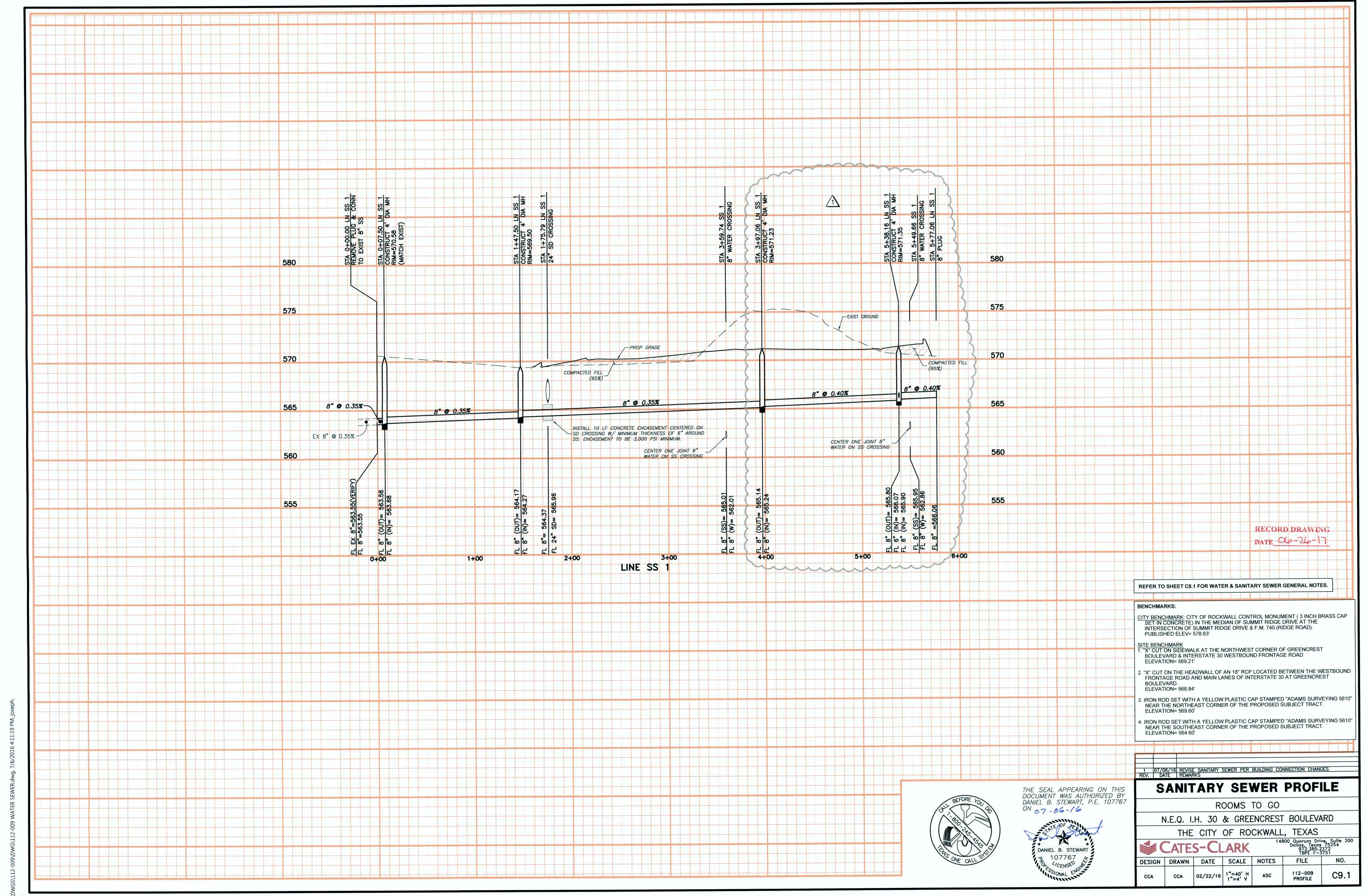
ROOMS TO GO

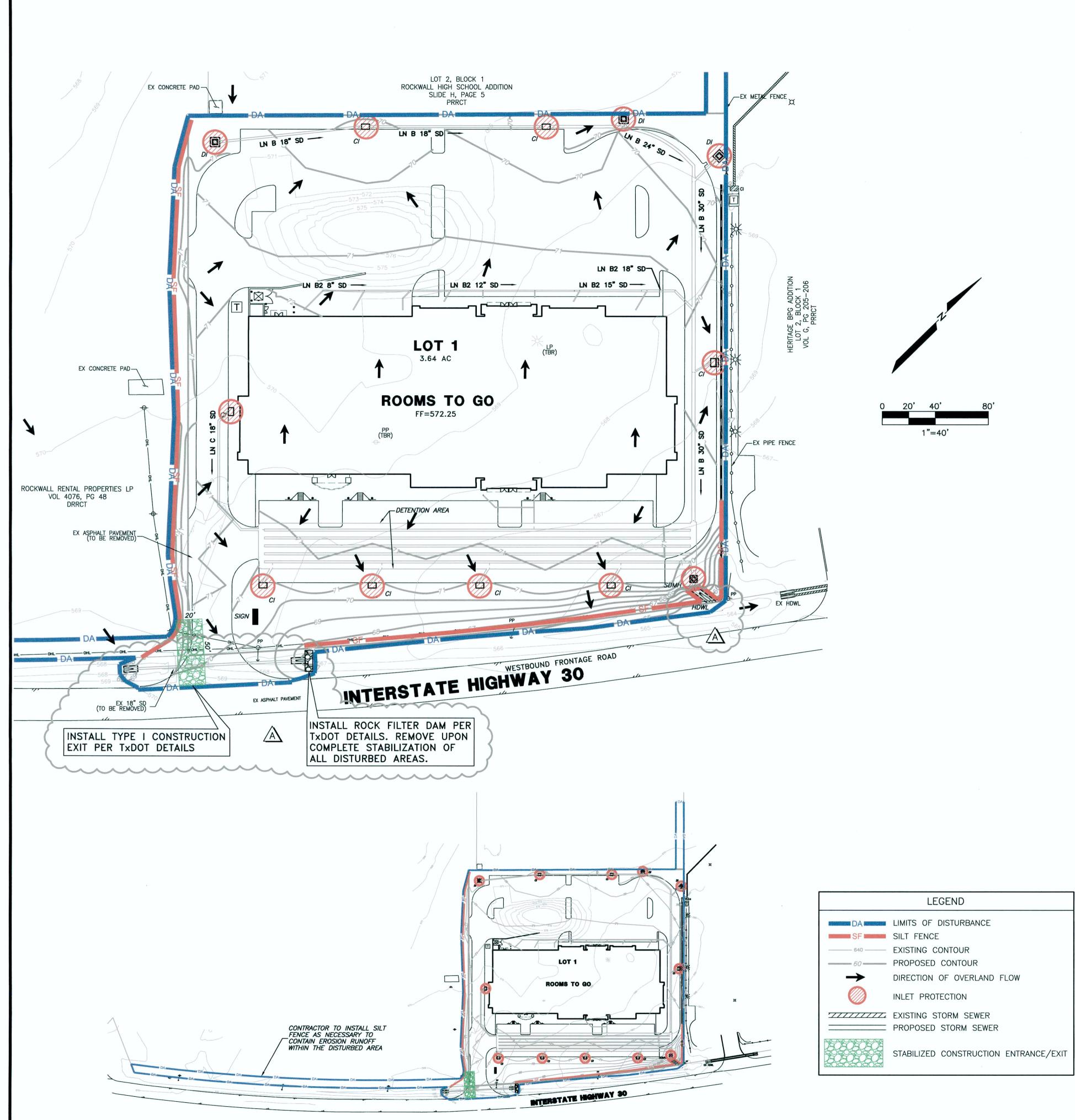
N.E.Q. I.H. 30 & GREENCREST BOULEVARD

THE CITY OF ROCKWALL, TEXAS 4800 Quorum Drive, Suite 200 Dallas, Texas 75254 972.385.2272 DRAWN DATE SCALE NOTES FILE NO. 112-009 CCA CCA 02/22/16 ASC 1"=40' WATER-SEWER



RECORD DRAWING DATE 06-26-17





EROSION CONTROL GENERAL NOTES

- 1. INSTALL SILT FENCES AROUND PERIMETER OF DISTURBED AREAS AS SHOWN.
- INSTALL SILT FENCE AT THE ENDS OF ALL EXPOSED STORM SEWER PIPES.
- CONSTRUCT THE TEMPORARY CONSTRUCTION ENTRANCE/EXIT(S)
- 4. COMMENCE CLEARING, GRUBBING AND REMOVAL OF VEGETATION IN AREA TO RECEIVE CUT OR FILL.
- COMMENCE GRADING OPERATION.

PHASE 2

- INSTALL ALL UNDERGROUND UTILITIES.
- 7. INSTALL PROTECTIVE SILT FENCES FOR ALL NEWLY CONSTRUCTED DRAINAGE INLET BOTTOMS AND AT THE ENDS OF EXPOSED STORM SEWER PIPES.
- FINALIZE PAVEMENT SUBGRADE PREPARATION.
- 9. CONSTRUCT INLET TOPS, DRAINAGE STRUCTURES, HEADWALLS, AND SLOPED END TREATMENTS. (PROTECTIVE SILT FENCES MAY BE REMOVED TEMPORARILY FOR THIS CONSTRUCTION.)
- 10. REMOVE INLET PROTECTION AROUND INLETS NO MORE THAN 48 HOURS PRIOR TO PLACING STABILIZED BASE COURSE.
- 11. INSTALL PAVEMENT.
- 12. REMOVE TEMPORARY CONSTRUCTION ENTRANCE/EXIT(S) ONLY PRIOR TO PAVEMENT CONSTRUCTION IN THESE AREAS. (THESE AREAS ARE TO BE PAVED LAST.)
- 13. COMPLETE SEEDING/PLANTING OF VEGETATED AREAS IN ACCORDANCE WITH THE LANDSCAPING PLAN TO ACCOMPLISH FINAL STABILIZATION.
- 14. 75% 80% OF ALL DISTURBED AREAS TO HAVE A MIN OF 1" TALL STAND OF GRASS (WINTER RYE IS NOT ALLOWED) PRIOR TO ENGINEERING ACCEPTANCE AND ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

NOTE TO CONTRACTOR

THE CONTRACTOR SHALL NOTE ON SITE PLAN THE LOCATION OF ALL MATERIAL STORAGE AREAS, EQUIPMENT STORAGE AREAS, PETROLEUM TANKS, SOLID WASTE RECEPTACLES, SANITARY FACILITIES, ANY ON-SITE OR OFF-SITE BORROW OR STOCKPILE AREA, ANY ON-SITE OR OFF-SITE SUPPORT ACTIVITIES (SUCH AS ASPHALT OR CONCRETE PLANTS). CONTRACTOR SHALL ALSO PREPARE, KEEP ON SITE, AND MAINTAIN CURRENT A LIST OF MATERIALS WITH APPROXIMATE QUANTITIES, WHICH ARE STORED ON SITE.

NOTE

THERE ARE NO SENSITIVE AREAS, INCLUDING WETLANDS OR WATERS OF THE US, ON OR NEAR THE SITE. THERE ARE NO VEGETATED AREAS TO BE LEFT UNDISTURBED ON THE SITE.

FEMA FLOOD NOTE

THIS PROPERTY LIES ENTIRELY WITHIN OTHER AREAS -ZONE X- AREAS DETERMINED TO BE OUTSIDE 500-YEAR FLOODPLAIN AS SHOWN ON THE NATIONAL FLOOD INSURANCE PROGRAM'S FLOOD INSURANCE RATE MAP (FIRM) FOR ROCKWALL COUNTY, TEXAS, AND INCORPORATED AREAS, PANEL 40 (MAP NUMBER 48397C0040 L) OF 145, MAPS REVISED SEPTEMBER 26, 2008 AS PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).

ACREAGE SUMMARY	1
TOTAL SITE	3.64 AC
TOTAL DISTURBED	4.11 AC
PRE-CONSTRUCTION RUNOFF COEFICIENT	0.35
POST CONSTRUCTION RUNOFF COEFFICIENT	0.90



DOCUMENT WAS AUTHORIZED BY DANIEL B. STEWART, P.E. 107767 ON 07-06-16 DANIEL B. STEWART 107767

THE SEAL APPEARING ON THIS

- 1. LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAVE BEEN RECEIVED BY THE GOVERNING AUTHORITIES.
- 2. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT

EROSION CONTROL GENERAL NOTES

- 3. THE GENERAL CONTRACTOR (AND ALL SUBCONTRACTORS INVOLVED WITH ANY CONSTRUCTION ACTIVITY RELATED TO EARTHWORK, EROSION CONTROL, ETC. OR WHICH UTILIZE POSSIBLE POLLUTANTS AS DEFINED IN THE TPDES GENERAL PERMIT) SHALL REVIEW AND ADHERE TO THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE PROJECT, AS WELL AS ALL THE TCEQ REQUIREMENTS SET FORTH IN THE TPDES GENERAL PERMIT.
- 4. THIS EROSION CONTROL PLAN IS A SUPPLEMENT TO THE SWPPP PREPARED BY OTHERS. REFER TO THE SWPPP FOR ADDITIONAL REQUIREMENTS.
- 5. THE CONTRACTOR SHALL ADHERE TO THE SEQUENCE OF OPERATIONS FOR EROSION CONTROL IMPLEMENTATION SHOWN HEREON. ANY DEVIATION FROM THIS SEQUENCE DEEMED NECESSARY BY THE CONTRACTOR MAY REQUIRE THAT THE SWPPP BE MODIFIED IN ACCORDANCE WITH THE TCEQ'S TPDES GENERAL PERMIT GUIDELINES.
- 6. ALL WASH WATER SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN WASH WATER POLLUTANTS AND STORM RUNOFF DISCHARGED FROM THIS SITE.
- 7. OIL AND GREASE ABSORBING MATERIALS SHALL BE READILY AVAILABLE ON-SITE AND SHALL BE PROMPTLY USED TO CONTAIN AND/OR CLEAN UP ALL FUEL OR CHEMICAL SPILLS OR LEAKS.
- 8. DUST CONTROL SHALL BE ACCOMPLISHED BY WATERING DRY, EXPOSED AREAS ON A REGULAR BASIS. SPRAYING OF PETROLEUM BASED OR TOXIC
- 9. DISTURBED AREAS ON THE SITE WHERE CONSTRUCTION ACTIVITY HAS CEASED FOR AT LEAST 14 DAYS SHALL BE TEMPORARILY PLANTED AND/OR

LIQUIDS FOR THIS IS PROHIBITED.

- SEEDED AND WATERED. 10. DISTURBED AREAS ON THE SITE WHERE CONSTRUCTION ACTIVITY HAS
- PERMANENTLY CEASED SHALL BE PERMANENTLY PLANTED AND/OR SEEDED WITHIN 14 DAYS. 11. PLANTING AND/OR SEEDING OF VEGETATED AREAS TO ACCOMPLISH

STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH THE

- LANDSCAPING PLAN. AREAS BEYOND THE LIMITS OF THE LANDSCAPING PLAN SHALL BE HYDROMULCHED WITH HIGHWAY MIX AND WATERED WITH TEMPORARY ABOVE GROUND IRRIGATION UNTIL THE VEGETATION IS
- 12. ALL VEHICLES SHALL BE CLEANED AT THE CONSTRUCTION EXIT POINT(S) BEFORE LEAVING THE SITE.
- 13. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED ONTO ADJACENT ROADWAYS BY ANY VEHICLES EXITING THE SITE SHALL BE CLEANED OR REMOVED IMMEDIATELY.
- 14. THE CONTRACTOR SHALL REMOVE ALL ACCUMULATED SILT IN ANY TEMPORARY OR PERMANENT DETENTION PONDS, STORM SEWER INLETS AND PIPES, AND ALONG SILT FENCES, WITHIN 48 HOURS AFTER INSPECTION OF DEVICES REVEALS THE PRESENCE OF EXCESS SILTATION.
- 15. SILT FENCES SHALL BE PLACED AROUND ANY STOCKPILES USED ON THE SITE.

16. ADDITIONAL EROSION CONTROL MEASURES MAY BE IMPLEMENTED BY THE

- CONTRACTOR AT HIS DISCRETION AT NO ADDITIONAL EXPENSE TO THE OWNER. THE ADDITION OR DELETION OF ANY EROSION CONTROL MEASURE MAY REQUIRE THAT THE SWPPP BE MODIFIED IN ACCORANCE WITH THE TCEQ'S TPDES GENERAL PERMIT GUIDELINES.
- 17. ALL TEMPORARY EROSION CONTROL DEVICES (SILT FENCE, ETC.) SHALL BE REMOVED AND PROPERLY DISPOSED OF OFF SITE WITHIN THIRTY DAYS AFTER STABILIZATION OF ALL DISTURBED SURFACES IS COMPLETE.
- 18. THE CONTRACTOR SHALL ASSUME LIABILITY FOR DAMAGE TO ADJACENT PROPERTIES AND/OR PUBLIC RIGHT OF WAY RESULTING FROM FAILURE TO FULLY IMPLEMENT AND EXECUTE ALL EROSION CONTROL PROCEDURES SHOWN AND NOTED IN THESE PLANS.
- 19. THE CONTRACTOR SHALL MODIFY THIS PLAN TO SHOW LOCATIONS OF TEMPORARY WASHDOWN AREA, PORTABLE TOILETS, EQUIPMENT MAINTENANCE/REPAIR AREAS, STOCKPILE AREAS, FUEL STORAGE AREAS, ETC. AND POLLUTANT CONTROLS FOR EACH.
- 20. THE GENERAL CONTRACTOR, AS THE TCEQ DEFINED "OPERATOR", SHALL PERFORM ALL REQUIRED INSPECTIONS OF STORM WATER CONTROLS AND PRACTICES AT FREQUENCES OUTLINED IN THE TPDES GENERAL PERMIT, AND SHALL FILL OUT APPROPRIATE INSPECTION FORMS (AS PROVIDED IN THE
- 21. IF DIRT OR ROCK IS EXPORTED FROM THIS SITE. OR IF DIRT OR ROCK IS IMPORTED FROM AN OFF SITE BORROW LOCATION, THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR COMPLIANCE WITH ALL TCEQ STORM WATER REQUIREMENTS FOR THE REMOTE SITE. THE CONTRACTOR SHALL FURNISH THE OWNER WITH A COPY OF THE WRITTEN AGREEMENT WITH THE LANDOWNER OF THE REMOTE SITE INDICATING PERMITTING AND EROSION CONTROL MEASURES WILL BE IMPLEMENTED THEREON.

BENCHMARKS:

CITY BENCHMARK: CITY OF ROCKWALL CONTROL MONUMENT (3 INCH BRASS CAP SET IN CONCRETE) IN THE MEDIAN OF SUMMIT RIDGE DRIVE AT THE INTERSECTION OF SUMMIT RIDGE DRIVE & F.M. 740 (RIDGE ROAD). PUBLISHED ELEV= 578.63'

SITE BENCHMARK

1. "X" CUT ON SIDEWALK AT THE NORTHWEST CORNER OF GREENCREST BOULEVARD & INTERSTATE 30 WESTBOUND FRONTAGE ROAD. ELEVATION= 569.21'

- 2. "X" CUT ON THE HEADWALL OF AN 18" RCP LOCATED BETWEEN THE WESTBOUND FRONTAGE ROAD AND MAIN LANES OF INTERSTATE 30 AT GREENCREST BOULEVARD. ELEVATION= 568.841
- . IRON ROD SET WITH A YELLOW PLASTIC CAP STAMPED "ADAMS SURVEYING 5610" NEAR THE NORTHEAST CORNER OF THE PROPOSED SUBJECT TRACT. ELEVATION= 569.60'
- . IRON ROD SET WITH A YELLOW PLASTIC CAP STAMPED "ADAMS SURVEYING 5610" NEAR THE SOUTHEAST CORNER OF THE PROPOSED SUBJECT TRACT. ELEVATION= 564.60'

EROSION CONTROL PLAN

ROOMS TO GO

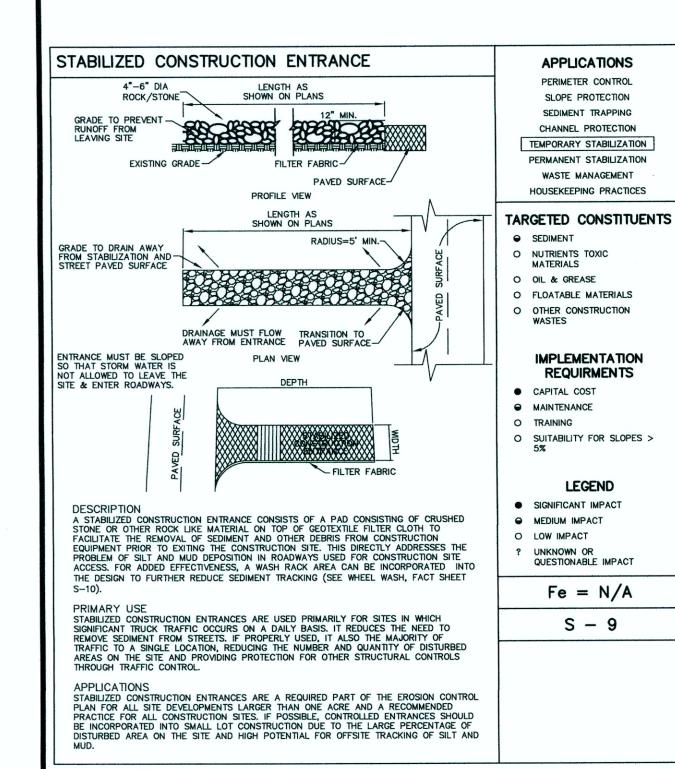
N.E.Q. I.H. 30 & GREENCREST BOULEVARD

THE CITY OF ROCKWALL, TEXAS DESIGN DRAWN DATE | SCALE | NOTES FILE NO. 112-009 C10.1 02/22/16 CCA CCA ASC 1"=40'

EROSION

RECORD DRAWING DATE 00-210-17







STABILIZED CONSTRUCTION ENTRANCES ARE TO BE CONSTRUCTED SUCH THAT DRAINAGE ACROSS THE ENTRANCE IS DIRECTED TO A CONTROLLED, STABILIZED OUTLET ON SITE WITH PROVISIONS FOR STORAGE, PROPER FILTRATION, AND REMOVAL OF WASH WATER.

REMOVAL OF WASH WATER.
THE ENTRANCE MUST BE SLOPED AWAY FROM THE PAVED SURFACE SO THAT STORM WATER IS NOT ALLOWED TO LEAVE THE SITE ONTO ROADWAYS.
MINIMUM WIDTH OF ENTRANCE SHALL BE 15 FEET.
STONE SHALL BE PLACED IN A LAYER OF AT LEAST 12—INCHES THICKNESS. THE STONE SHALL BE A MINIMUM OF 4 TO 6 INCH COARSE AGGREGATE.
PREVENT SHORTCUTTING OF THE FULL LENGTH OF THE CONSTRUCTION ENTRANCE BY INSTALL BLO PARPIEDS AS NECESSARY.

PREVENT SHORTCUTTING OF THE FULL LENGTH OF THE CONSTRUCTION ENTRANCE INSTALLING BARRIERS AS NECESSARY.

THE GEOTEXTILE FABRIC MUST MEET THE FOLLOWING MINIMUM CRITERIA:

TENSILE STRENGTH, ASTM D4632 TEST METHOD FOR GRAB BREAKING LOAD AND ELONGATION OF GEOTEXTILES, 300—LBS.

PUNCTURE STRENGTH, ASTM D4833 TEST METHOD FOR INDEX PRINCTURE RESISTANCE OF GEOTETILES, GEOMEMBRANES AND RELATED PRODUCTS, 120-MULLEN BURST RATING, ASTM D3786 STANDARD TEST METHOD FOR

HYDRAULIC BURSTING STRENGTH OF TEXTILE FABRICS—DIAPHRAGM
BURSTING STRENGTH TESTER METHOD, 600—P.S.I.
APPARENT OPENING SIZE, ASTM D4751 TEST FOR DETERMINING APPARENT OPENING SIZE, ASIM 04/51 TEST FOR DETERMINING AFFARENT OPENING SIZE OF A GEOTEXTILE, U.S. SIEVE NO. 40(MAX).

WHEN NECESSARY, VEHICLES MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PAVED ROADS, STREETS, OR PARKING LOTS. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A CONSTRUCTED WHEEL WASH FACILITY THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN OR OTHER SEDIMENTATION/FILLTRATION DEVICE.

MINIMUM DIMENSIONS FOR THE ENTRANCE SHALL BE AS FOLLOWS:

TRACT AREA	AVG. TRACT. DEPTH	MIN. WIDTH OF ENTRANCE	MIN. DEPTH OF ENTRANCE
< 1 ACRE	100 FEET	15 FEET	20 FEET
< 5 ACRES	200 FEET	20 FEET	50 FEET
> 5 ACRES	> 200 FEET	25 FEET	75-100 FEET

LEGEND

S-9

LIMITATIONS SELECTION OF THE CONSTRUCTION ENTRANCE LOCATION IS CRITICAL. TO BE EFFECTIVE, IT MUST BE USED EXCLUSIVELY STABILIZED ENTRANCES ARE RATHER EXPENSIVE CONSIDERING THAT IT MUST BE INSTALLED IN COMBINATION WITH ONE OR MORE OTHER SEDIMENT CONTROL TECHNIQUES, BUT IT MAY BE COST EFFECTIVE COMPARED TO LABOR—INTENSIVE STREET CLEANING

MAINTENANCE REQUIREMENTS CONSTRUCTION ENTRANCES SHOULD BE INSPECTED REGULARLY (AT LEAST AS OFTEN AS REQUIRED BY THE TPDES CONSTRUCTION GENERAL PERMIT, APPENDIX A). WHEN SEDIMENT HAS SUBSTANTIALLY CLOGGED THE VOID AREA BETWEEN THE ROCKS, THE AGGREGATE MAT MUST BE WASHED DOWN OR REPLACED. PERIODIC RE-GRADING AND TOP DRESSING WITH ADDITIONAL STONE MUST BE DONE TO KEEP THE EFFICIENCY OF THE ENTRANCE

IF THE STABILIZED CONSTRUCTION ENTRANCE IS NOT EFFECTIVELY REMOVING SEDIMENT FROM WHEELS THEN A WHEEL WASH SHOULD BE CONSIDERED. SPECIFICATION FOR CONSTRUCTION OF THIS ITEM MAY BE FOUND IN THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION — NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, SECTION 201.10 STABILIZED CONSTRUCTION ENTRANCE.

SPECIFICATION
SPECIFICATIONS FOR CONSTRUCTION OF THIS ITEM MAY BE FOUND IN THE STANDARD
SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION—NORTH CENTRAL TEXAS COUNCIL OF
GOVERNMENTS, SECTION 201.15 INLET PROTECTION.

WHEEL WASH

PERIMETER CONTROL SLOPE PROTECTION SEDIMENT TRAPPING CHANNEL PROTECTION TEMPORARY STABILIZATION FLOW TO SEDIMENT TRAPPING DEVICES
SUCH AS SEDIMENT BASIN OR STONE PERMANENT STABILIZATION WASTE MANAGEMENT HOUSEKEEPING PRACTICES

NUTRIENTS TOXIC

O OTHER CONSTRUCTION

IMPLEMENTATION

REQUIRMENTS

SUITABILITY FOR SLOPES >

LEGEND

UNKNOWN OR QUESTIONABLE IMPACT

Fe = N/A

S - 10

SIGNIFICANT IMPACT

O LOW IMPACT

MATERIALS

MAINTENANCE

TRAINING

TARGETED CONSTITUENTS THE WHEEL WASH IS USED IN CONJUNCTION WITH A STABILIZED CONSTRUCTION ENTRANCE TO PROVIDE AN AREA WHERE TRUCK WHEELS AND UNDERCARRIAGES CAN BE CLEANED PRIOR TO TRAVERSING THE STABILIZED CONSTRUCTION ENTRANCE AND ENTERING THE SEDIMENT PRIOR TO INAVERSING THE STABILIZED CONSTROCTION ETHANGE AND ENTERING THE PUBLIC ROAD SYSTEM. A WHEEL WASH MAY CONSIST OF AN IMPERVIOUS AREA OR A GRATE OVER A SWALE. WASH WATER FROM HAND HELD PRESSURE WASHERS OR FIXED NOZZLES IS COLLECTED AND DRAINED TO A SEDIMENT—TRAPPING DEVICE SUCH AS A STONE OUTLET SEDIMENT TRAP OR SEDIMENT BASIN TO PROVIDE FOR REMOVAL OF SEDIMENT PRIOR TO DISCHARGE. O OIL & GREASE O FLOATABLE MATERIALS

WHEEL WASHES SHOULD BE USED ON LARGE JOBS WHERE THERE IS SIGNIFICANT TRUCK TRAFFIC, ON THOSE SITES WHERE SITE CONDITIONS CAUSE THE STABILIZED CONSTRUCTION ENTRANCE TO BE OVERLOADED WITH SEDIMENT AND BECOME INEFFECTIVE, AND IN THOSE INSTANCES WHERE CONTAMINATED SOLIDS MIGHT BE PRESENT ON SITE. THEY PROVIDE ADDED PROTECTION AND REDUCE THE NEED TO REMOVE SEDIMENT FROM STREETS.

WHEEL WASHES SHOULD BE CONSIDERED AN ANCILLARY COMPONENT TO STABILIZED CONSTRUCTION ENTRANCE. DESIGN CRITERIA THE LOCATION SHOULD BE WITHIN THE STABILIZED CONSTRUCTION ENTRANCE SO THAT THE VEHICLE DOES NOT PICK UP ADDITIONAL SEDIMENT LOAD BY TRAVERSING DISTURBED AREAS.
THE SIZE OF THE WHEEL WASH FACILITY SHOULD BE SUFFICIENT SO THAT ALL WASH WATER AND SEDIMENT IS COLLECTED AND DRAINED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT BASIN OR STONE OUTLET SEDIMENT TRAP.

JGGESTED DESIGNS:

4-INCH THICK ASPHALT PAVEMENT ON AN 8-INCH BASE OF CRUSHED ROCK GRADED SO THAT WASH WATER DRAINS TO A SWALE; OR GRATE SUITABLY DESIGNED TO SUPPORT CONSTRUCTION VEHICLES INSTALLED OVER A SWALE. THE FACILITY SHOULD BE DESIGNED SO THAT IT CAN BE CLEANED BETWEEN USES.

SEDIMENT TRAPPING BMPs USED IN CONJUNCTION WITH WHEEL WASH FACILITIES MUST BE CAREFULLY DESIGNED FOR THE ANTICIPATED AMOUNT OF WASH WATER TO BE TREATED. MAINTENANCE REQUIREMENTS WHEEL WASH FACILITIES SHOULD BE INSPECTED REGULARLY (AT LEAST AS OFTEN AS REQUIRED BY THE TPDES CONSTRUCTION GENERAL PERMIT, APPENDIX A). THE SURFACE OF THE WHEEL WASH SHOULD BE CLEANED BETWEEN VEHICLES AS NECESSARY. SEDIMENT

THAT HAS ACCUMULATED IN THE WASH WATER SEDIMENTATION BMP (SEDIMENT TRAP, SEDIMENT BASIN, ETC.) MUST BE REMOVED WHEN IT REACHES A DEPTH OF APPROXIMATELY 1/3 THE DESIGN DEPTH OF THE DEVICE OR 12", WHICHEVER IS LESS. THE REMOVED SEDIMENT SHALL BE STOCKPILED OR REDISTRIBUTED IN AREAS THAT ARE

NO SPECIFICATION FOR CONSTRUCTION OF THIS ITEM IS CURRENTLY AVAILABLE IN THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION—NORTH CENTRAL TEXAS

PLAN VIEW

SILT FENCE **APPLICATIONS** DISTURBED AREA STABILIZED AREA

DESCRIPTION
A SILT FENCE CONSISTS OF GEOTEXTILE FABRIC SUPPORTED BY WIRE MESH NETTING OR OTHER BACKING STRETCHED BETWEEN EITHER WOODEN OR METAL POSTS WITH THE LOWER EDGE OF THE FABRIC SECURELY EMBEDDED SIX-LNCHES IN THE SOIL. THE FENCE IS TYPICALLY LOCATED DOWNSTREAM OF DISTURBED AREAS TO INTERCEPT RUNOFF IN THE FORM OF SHEET FLOW. A SILT FENCE PROVIDES BOTH FILTRATION AND TIME FOR SEDIMENT SETTLING BY REDUCING THE VELOCITY OF THE RUNOFF.

SILT FENCE IS NORMALLY USED AS PERIMETER CONTROL LOCATED DOWNSTREAM OF DISTURBED AREAS. IT IS ONLY FEASIBLE FOR NON-CONCENTRATED, SHEET FLOW CONDITIONS. IF IT BECOMES NECESSARY TO PLACE A SILT FENCE WHERE CONCENTRATED FLOWS MAY BE EXPERIENCED (E.G. WHERE TWO SILT FENCES JOIN AT AN ANGLE, OR ACROSS MINOR CHANNELS OR GULLIES), IT WILL BE NECESSARY TO REINFORCE THE SILT FENCE AT THAT AREA BY A ROCK BERM OR SAND BAG BERM, OR OTHER STRUCTURAL MEASURES THAT WILL SUPPORT THE SILT FENCE.

APPLICATIONS
SILT FENCE IS AN ECONOMICAL MEANS TO TREAT OVERLAND, NON-CONCENTRATED FLOWS
FOR ALL TYPES OF PROJECTS. SILT FENCES ARE USED AS PERIMETER CONTROL DEVICES
FOR BOTH SITE DEVELOPERS END LINEAR (ROADWAY) TYPE PROJECTS. THEY ARE MOST
EFFECTIVE WITH COARSE TO SILTY SOIL TYPES. DUE TO THE POTENTIAL OF CLOGGING AND
LIMITED EFFECTIVENESS, SILT FENCES SHOULD BE USED WITH CAUTION IN AREAS THAT
HAVE PREDOMINANTLY CLAY SOIL TYPES. IN THIS LATTER INSTANCE A SOILS ENGINEER OR
SOIL SCIENTIST SHOULD CONFIRM THE SUITABILITY OF SILT FENCE FOR THAT APPLICATION.

FENCES ARE TO BE CONSTRUCTED ALONG A LINE OF CONSTANT ELEVATION (ALONG A CONTOUR LINE) WHERE POSSIBLE.
MAXIMUM DRAINAGE AREA SHALL BE 0.25 ACRE PER 100 LINEAR FEET OF SILT

MAXIMUM FLOW TO ANY 20 FOOT SECTION OF SILT FENCE SHALL BE 1 CFS.
MAXIMUM DISTANCE OF FLOW TO SILT FENCE SHALL BE 200 FEET OR LESS. IF THE
SLOPE EXCEEDS 10 PERCENT THE FLOW DISTANCE SHALL BE LESS THAN 50 FEET.
MAXIMUM SLOPE ADJACENT TO THE FENCE SHALL BE 2:1.
IF 50% OR LESS SOIL, BY WEIGHT, PASSES THE U.S. STANDARD SLEEVE NO. 200; IF 50% OR LESS SOIL, BY WEIGHT, PASSES THE U.S. STANDARD SLEEVE NO. 200; SELECT THE APPARENT OPENING SIZE (A.O.S.) TO RETAIN 85% OF THE SOIL. IF 85% OR MORE OF SOIL BY WEIGHT, PASSES THE U.S. STANDARD SLEEVE NO. 200, SILT FENCES SHALL NOT BE USED UNLESS THE SOIL MASS IS EVALUATED AND DEEMED SUITABLE BY A SOIL SCIENTIST OR GEOTECHNICAL ENGINEER CONCERNING THE ERODIBLITY OF THE SOIL MASS, DISPERSIVE CHARACTERISTICS, AND THE POTENTIAL GRAIN—SIZE CHARACTERISTICS OF THE MATERIAL THAT IS LIKELY TO BE

STONE OVERFLOW STRUCTURES OR OTHER OUTLET CONTROL DEVICES SHALL BE INSTALLED AT ALL LOW POINTS ALONG THE FENCE OR SPACED AT APPROXIMATELY 300 FEET IF THERE IS NO APPARENT LOW POINT. FILTER STONE FOR OVERFLOW STRUCTURE SHALL BE 1-1/2" WASHED STONE CONTAINING NO FINES. ANGULAR SHAPED STONE IS PREFERABLE TO ROUNDED

APPLICATIONS PERIMETER CONTROL SILT FENCE

SLOPE PROTECTION SEDIMENT TRAPPING CHANNEL PROTECTION TEMPORARY STABILIZATION PERMANENT STABILIZATION WASTE MANAGEMENT

HOUSEKEEPING PRACTICES

TARGETED CONSTITUENTS

 SEDIMENT O NUTRIENTS TOXIC MATERIALS

OIL & GREASE ● FLOATABLE MATERIALS OTHER CONSTRUCTION

IMPLEMENTATION REQUIRMENTS CAPITAL COST

MAINTENANCE O TRAINING SUITABILITY FOR SLOPES >

LEGEND SIGNIFICANT IMPACT

D LOW IMPACT QUESTIONABLE IMPACT

Fe = 0.75S-1

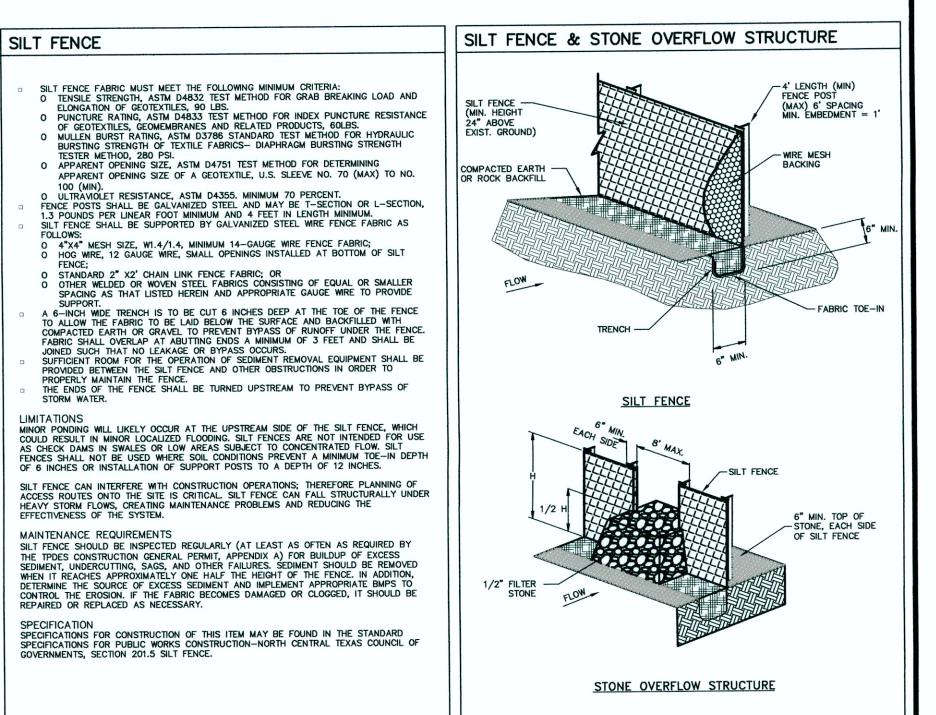
SPECIFICATIONS FOR CONSTRUCTION OF THIS ITEM MAY BE FOUND IN THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION—NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, SECTION 201.5 SILT FENCE.

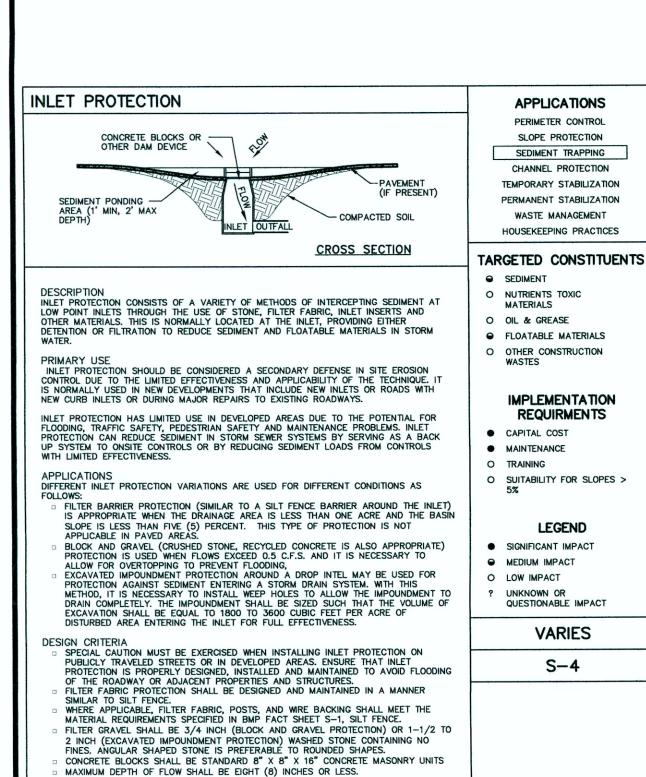
MAINTENANCE REQUIREMENTS

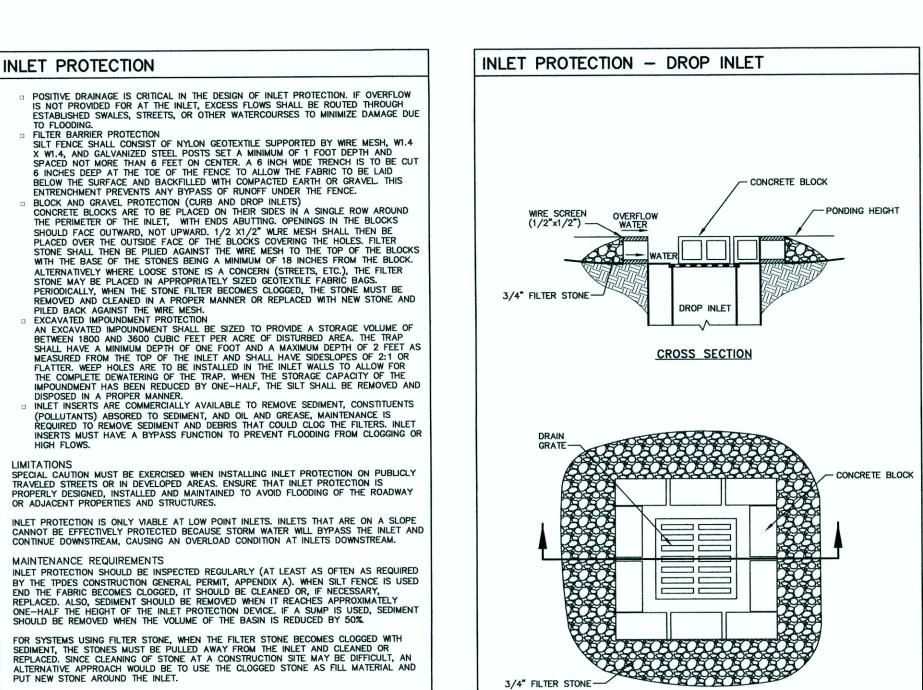
APPARENT OPENING SIZE OF A GEOTEXTILE, U.S. SLEEVE NO. 70 (MAX) TO NO.

HOG WIRE, 12 GAUGE WIRE, SMALL OPENINGS INSTALLED AT BOTTOM OF SILT

O 4"X4" MESH SIZE, W1.4/1.4, MINIMUM 14-GAUGE WIRE FENCE FABRIC

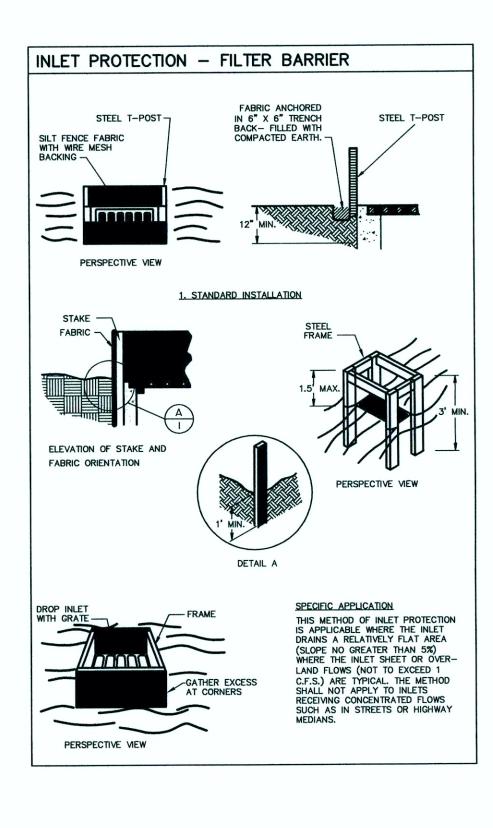


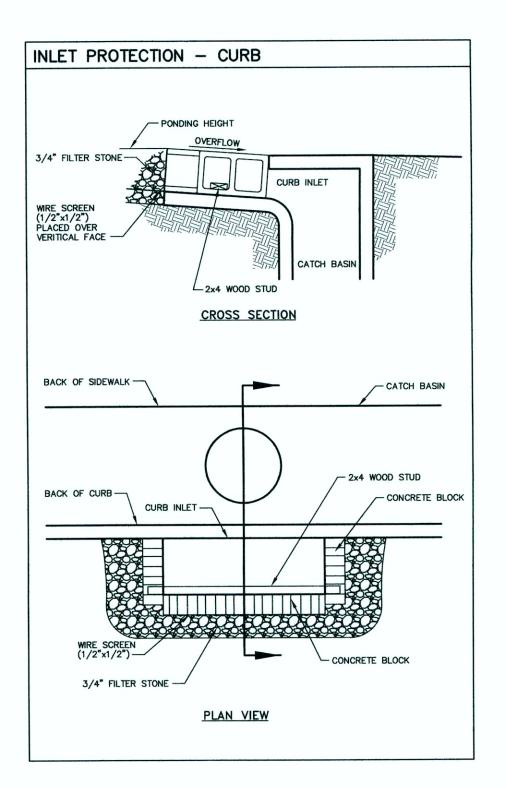


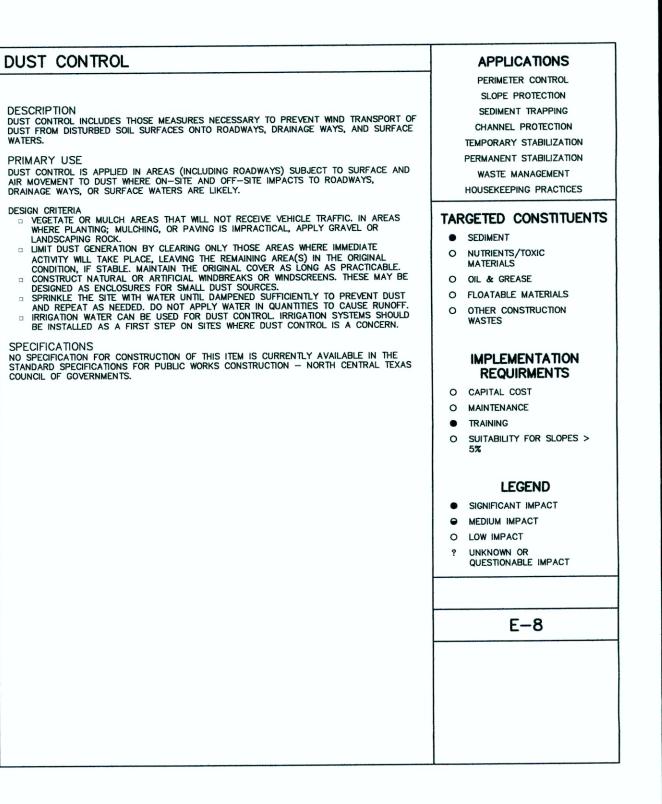


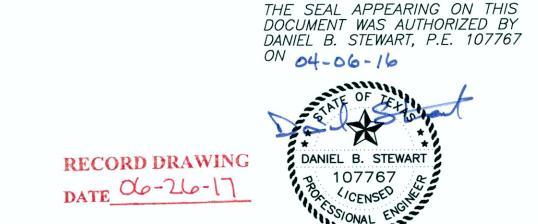
APPLICATIONS

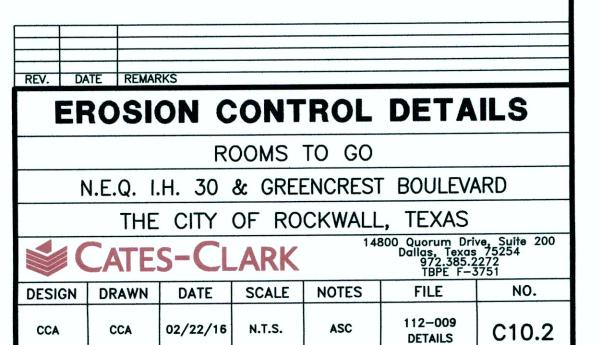
COUNCIL OF GOVERNMENTS.

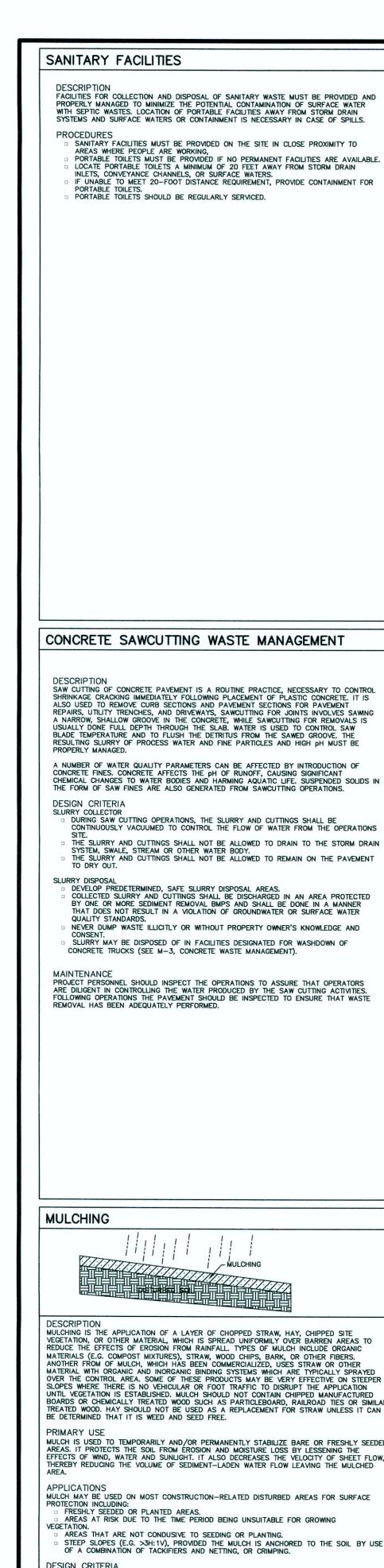












APPLICATIONS

PERIMETER CONTROL

SLOPE PROTECTION

SEDIMENT TRAPPING

CHANNEL PROTECTION

TEMPORARY STABILIZATION

PERMANENT STABILIZATION

WASTE MANAGEMENT

HOUSEKEEPING PRACTICES

TARGETED CONSTITUENTS

O SEDIMENT

NUTRIENTS TOXIC

O FLOATABLE MATERIALS

OTHER CONSTRUCTION

IMPLEMENTATION

REQUIRMENTS

O SUITABILITY FOR SLOPES >

LEGEND

UNKNOWN OR QUESTIONABLE IMPACT

M-7

APPLICATIONS

PERIMETER CONTROL

SLOPE PROTECTION

SEDIMENT TRAPPING

CHANNEL PROTECTION

TEMPORARY STABILIZATION

PERMANENT STABILIZATION

WASTE MANAGEMENT

HOUSEKEEPING PRACTICES

TARGETED CONSTITUENTS

NUTRIENTS TOXIC

O FLOATABLE MATERIALS

OTHER CONSTRUCTION

IMPLEMENTATION

REQUIRMENTS

O SUITABILITY FOR SLOPES >

LEGEND

O SIGNIFICANT IMPACT

■ MEDIUM IMPACT

UNKNOWN OR

QUESTIONABLE IMPACT

M-4

APPLICATIONS PERIMETER CONTROL

SLOPE PROTECTION SEDIMENT TRAPPING

CHANNEL PROTECTION

PERMANENT STABILIZATION

WASTE MANAGEMENT

HOUSEKEEPING PRACTICES

TARGETED CONSTITUENTS

SEDIMENT

O NUTRIENTS TOXIC

MATERIALS

O OIL & GREASE

CAPITAL COST

O TRAINING

O FLOATABLE MATERIALS

O OTHER CONSTRUCTION

IMPLEMENTATION

REQUIRMENTS

O SUITABILITY FOR SLOPES >

LEGEND

QUESTIONABLE IMPACT

Fe = 0.9

E-5

SIGNIFICANT IMPACT

MEDIUM IMPACT

O LOW IMPACT

TEMPORARY STABILIZATION

O LOW IMPACT

MATERIALS

O OIL & GREASE

O CAPITAL COST

■ MAINTENANCE

TRAINING

SIGNIFICANT IMPACT

● MEDIUM IMPACT

O LOW IMPACT

MATERIALS

O OIL & GREASE

O CAPITAL COST

■ MAINTENANCE

TRAINING

ROOFING MATERIALS STORAGE PROCEDURES HANDLING PROCEDURES. TO INTERCEPT LIME FROM RUNOFF AND REDUCE RUNOFF VELOCITY.

GEOTEXTILE FABRICS SUCH AS THOSE USED FOR SILT FENCE SHOULD NOT BE USED

TO ADDRESS LIME SINCE THE GRAIN SIZE OF LIME IS SIGNIFICANTLY SMALLER THAN

THE APPARENT OPENING SIZE OF THE FABRIC.

FOR AREAS FOR WHICH PHASING OF LIME OPERATIONS IS IMPRACTICAL, USE OF A

CURING SEAL SUCH AS LIQUID ASPHALT, GRADE MC-250 OR MC-800 APPLIED AT A

RATE OF 0.15 GALLONS PER SQ. YD. OF SURFACE CAN BE USED TO PROTECT THE USE OF SEDIMENT BASINS WITH A SIGNIFICANT (>36 HOUR) DRAWDOWN TIME IS ENCOURAGED FOR LARGE AREAS TO BE STABILIZED (SEE S-6, SEDIMENT BASIN). PROVIDE CONTAINMENT AROUND LIME STORAGE, LOADING, AND DISPENSING AREAS.

DEBRIS AND TRASH MANAGEMENT THE CONTRACTOR SHALL LIMIT LIME OPERATIONS TO THAT WHICH CAN BE O TRAFFIC OTHER THAN WATER TRUCKS AND MIXING EQUIPMENT SHALL BE ALLOWED TO PASS OVER THE SPREAD LIME UNTIL AFTER COMPLETION OF MIXING.

AREAS ADJACENT AND DOWNSTREAM OF STABILIZED AREAS SHALL BE ROUGHENED INTERCEPT LIME FROM RUNOFF AND REDUCE RUNOFF VELOCI

DESCRIPTION

LARGE VOLUMES OF DEBRIS AND TRASH ARE OFTEN GENERATED AT CONSTRUCTION SITES INCLUDING: PACKAGING, PALLETS, WOOD WASTE, CONCRETE WASTE, SOIL, ELECTRICAL WIRING, CUTTINGS, AND A VARIETY OF OTHER MATERIALS. THERE ARE SEVERAL TECHNIQUES AND PROCEDURES TO MINIMIZE THE POTENTIAL OF STORM WATER CONTAMINATION FROM SOLID WASTE THROUGH APPROPRIATE STORAGE AND DISPOSAL PRACTICES. RECYCLING OF CONSTRUCTION DEBRIS ALSO REDUCES THE VOLUME OF MATERIAL TO BE DISPOSED OF AND ASSOCIATED COAST INSULATION CONCRETE, BRICK, AND MORTAR LIME STABILIZED SURFACE -THIS BMP SHOULD BE IMPLEMENTED WHEN LIME IS REQUIRED FOR SOIL STABILIZATION. LIME STABILIZATION CAN BE USED UNDER A VARIETY OF CONDITIONS. THE ENGINEER SHOULD DETERMINE THE APPLICABILITY OF LIME STABILIZATION BASED ON SITE CONDITIONS SUCH AS AVAILABLE OPEN SPACE, QUANTITY OF AREA TO BE STABILIZED, PROXIMITY OF NEARBY WATER COURSES AND OTHER BMPS EMPLOYED AT THE SITE. THE USE OF DIVERSION DIKES AND INTERCEPTOR SWALES (SEE APPROPRIATE FACT SHEETS) TO DIVERT RUNOFF AWAY FROM AREAS TO BE STABILIZED CAN BE USED IN CONJUNCTION WITH THESE TECHNIQUES TO REDUCE THE IMPACT OF THE LIME.

CHANNEL PROTECTION TEMPORARY STABILIZATION MATERIAL TO BE DISPOSED OF AND ASSOCIATED COST PERMANENT STABILIZATION WASTE MANAGEMENT DEBRIS AND TRASH MANAGEMENT SHOULD BE A PART OF ALL CONSTRUCTION PRACTICES. BY LIMITING THE TRASH AND DEBRIS ON SITE, STORM WATER QUALITY IS IMPROVED ALONG WITH REDUCED CLEAN UP REQUIREMENTS AT THE COMPLETION OF THE PROJECT. HOUSEKEEPING PRACTICES TARGETED CONSTITUENTS APPLICATIONS
SOLID WASTE MANAGEMENT FOR CONSTRUCTION SITES IS BASED ON PROPER STORAGE
AND DISPOSAL PRACTICES BY CONSTRUCTION WORKERS AND SUPERVISORS. KEY ELEMENTS
OF THE PROGRAM ARE EDUCATION AND MODIFICATION OF IMPROPER DISPOSAL HABITS.
COOPERATION AND VIGILANCE IS REQUIRED ON THE PART OF SUPERVISORS AND WORKERS
TO ENSURE THAT THE RECOMMENDATIONS AND PROCEDURES ARE FOLLOWED. FOLLOWING
ARE LISTS DESCRIBING THE TARGETED MATERIALS AND RECOMMENDED PROCEDURES: O SEDIMENT NUTRIENTS/TOXIC MATERIALS O OIL & GREASE FLOATABLE MATERIALS CONSTRUCTION, (AND DEMOLITION) DEBRIS DIMENSIONAL LUMBER OTHER CONSTRUCTION MISCELLANEOUS WOOD (PALLETS, PLYWOOD, ETC) COPPER (PIPE AND ELECTRICAL WIRING)
MISCELLANEOUS METAL (STUDS, PIPE, CONDUIT, SHEATHING, NAILS, ETC) IMPLEMENTATION REQUIRMENTS □ CAPITAL COST ■ MAINTENANCE PAPER AND CARDBOARD (PACKAGING, CONTAINERS, WRAPPERS) TRAINING PLASTIC (PACKAGING, BOTTLES, CONTAINERS O SUITABILITY FOR SLOPES > STYROFOAM (CUPS, PACKING, AND FORMS) FOOD AND BEVERAGE CONTAINERS LEGEND WHEREVER POSSIBLE, MINIMIZE PRODUCTION OF DEBRIS AND TRASH.

DESIGNATE A FOREMAN OR SUPERVISOR TO OVERSEE AND ENFORCE PROPER DEBRIS SIGNIFICANT IMPACT INSTRUCT CONSTRUCTION WORKERS IN PROPER DEBRIS AND TRASH STORAGE AND **● MEDIUM IMPACT** SEGREGATE POTENTIALLY HAZARDOUS WASTE FROM NON-HAZARDOUS CONSTRUCTION O LOW IMPACT UNKNOWN OR SEGREGATE RECYCLABLE CONSTRUCTION DEBRIS FROM OTHER NON-RECYCLABLE QUESTIONABLE IMPACT KEEP DEBRIS AND TRASH UNDER COVER IN ETHER A CLOSED DUMPSTER OR OTHER PREVENTS LIGHT MATERIALS FROM BLOWING OUT. STORE WASTE MATERIALS AWAY FROM DRAINAGE DITCHES, SWALES AND CATCH NO.

DO NOT ALLOW TRASH CONTAINERS TO OVERFLOW,
DO NOT ALLOW WASTE MATERIALS TO ACCUMULATE ON THE GROUND. M-1PROHIBIT LITTERING BY WORKERS AND VISITORS.
POLICE SITE DAILY FOR LITTER AND DEBRIS,
ENFORCE SOLID WASTE HANDLING AND STORAGE PROCEDURES. IF FEASIBLE, RECYCLE CONSTRUCTION AND DEMOLITION DEBRIS SUCH AS WOOD, METAL, AND CONCRETE.

GENERAL CONSTRUCTION DEBRIS MAY BE HAULED TO A LICENSED CONSTRUCTION DEBRIS LANDFILL (TYPICALLY LESS EXPENSIVE THAN A SANITARY LANDFILL), USE WASTE AND RECYCLING HAULERS/FACILITIES APPROVED BY THE LOCAL LIME STABILIZATION MANAGEMENT **APPLICATIONS** PERIMETER CONTROL SLOPE PROTECTION ROUGHEN SLOPES > COLLECT RUNOF SEDIMENT TRAPPING CHANNEL PROTECTION WASTE MANAGEMENT DESCRIPTION

LIME STABILIZATION IS USED EXTENSIVELY IN THE NORTH CENTRAL TEXAS REGION TO STABILIZE PAVEMENT SUBBASES FOR ROADWAYS, PARKING LOTS, END OTHER PAVED SURFACES, AND AS A SUBGRADE AMENDMENT FOR BUILDING PAD SITES. HYDRATED LIME IS APPLIED TO THE SOIL AND MIXED THROUGH DISKING AND OTHER TECHNIQUES, THEN ALLOWED TO CURE. THIS PRACTICE WILL REDUCE THE POTENTIAL FOR RUNOFF TO CARRY LIME OFFSITE, WHERE IT MAY IMPACT AQUATIC LIFE BY CHANGING THE pH BALANCE OF STREAMS, PONDS, AND OTHER WATER BODIES. SEDIMENT NUTRIENTS TOXIC MATERIALS OIL & GREASE

TEMPORARY STABILIZATION PERMANENT STABILIZATION HOUSEKEEPING PRACTICES TARGETED CONSTITUENTS D FLOATABLE MATERIALS OTHER CONSTRUCTION WASTES IMPLEMENTATION REQUIRMENTS CAPITAL COST MAINTENANCE O TRAINING O SUITABILITY FOR SLOPES > LEGEND SIGNIFICANT IMPACT MEDIUM IMPACT LOW IMPACT QUESTIONABLE IMPACT LIMITATIONS
LIME STABILIZATION CAN BE PART OF AN OVERALL PLAN TO REDUCE POLLUTANTS FROM AN ACTIVE CONSTRUCTION SITE. IN THE CASE OF POLLUTION DUE TO LIME, PREVENTION OF CONTAMINATION IS THE ONLY EFFECTIVE METHOD TO ADDRESS THIS POLLUTANT. M-6

APPLICATIONS

PERIMETER CONTROL

SLOPE PROTECTION

SEDIMENT TRAPPING

PERIMETER CONTROL SLOPE PROTECTION DECLIFIED BY EDUCATE ALL WORKERS ON SOLID WASTE STORAGE AND DISPOSAL PROCEDURES.
INSTRUCT WORKERS IN IDENTIFICATION OF SOLID WASTE AND HAZARDOUS WASTE.
HAVE REGULAR MEETINGS TO DISCUSS AND REINFORCE DISPOSAL PROCEDURES SEDIMENT TRAPPING CHANNEL PROTECTION TEMPORARY STABILIZATION (INCORPORATE IN REGULAR SAFETY SEMINARS). CLEARLY MARK ON ALL DEBRIS AND TRASH CONTAINERS WHICH MATERIALS ARE PERMANENT STABILIZATION WASTE MANAGEMENT QUALITY CONTROL HOUSEKEEPING PRACTICES FOREMAN AND/OR CONSTRUCTION SUPERVISOR SHALL MONITOR ON—SITE SOLID WASTE STORAGE AND DISPOSAL PROCEDURES.

DISCIPLINE WORKERS WHO REPEATEDLY VIOLATE PROCEDURES. TARGETED CONSTITUENTS REQUIREMENTS JOB-SITE WASTE HANDLING AND DISPOSAL EDUCATION AND AWARENESS PROGRAM,.
COMPLIANCE BY WORKERS. NUTRIENTS TOXIC COMPLIANCE BY WORKERS.
SUFFICIENT AND APPROPRIATE WASTE STORAGE CONTAINERS.
TIMELY REMOVAL OF STORED SOLID WASTE MATERIALS.. MATERIALS O OIL & GREASE TRAINING WORKERS AND MONITORING COMPLIANCE FLOATABLE MATERIALS LIMITATIONS OTHER CONSTRUCTION ONLY ADDRESSES NON-HAZARDOUS SOLID WASTE.
ONE PART OF A COMPREHENSIVE CONSTRUCTION SITE MANAGEMENT PROGRAM. IMPLEMENTATION REQUIRMENTS ■ MAINTENANCE TRAINING O SUITABILITY FOR SLOPES > LEGEND SIGNIFICANT IMPACT O LOW IMPACT UNKNOWN OR QUESTIONABLE IMPACT M-1CHEMICAL MANAGEMENT **APPLICATIONS** PERIMETER CONTROL SLOPE PROTECTION CHEMICAL MANAGEMENT ADDRESSES THE PROBLEM OF STORM WATER POLLUTED WITH CHEMICAL POLLUTANTS THROUGH SPILLS OR OTHER FORMS OF CONTACT. THE OBJECTIVE OF THE CHEMICAL MANAGEMENT IS TO MINIMIZE THE POTENTIAL OF STORM WATER CONTAMINATION FROM CONSTRUCTION CHEMICALS THROUGH APPROPRIATE RECOGNITION, SEDIMENT TRAPPING CHANNEL PROTECTION ANDLING, STORAGE, AND DISPOSAL PRACTICES. TEMPORARY STABILIZATION PERMANENT STABILIZATION IT IS NOT THE INTENT OF CHEMICAL MANAGEMENT TO SUPERSEDE OR REPLACE NORMAL SITE ASSESSMENT AND REMEDIATION PROCEDURES. SIGNIFICANT SPILLS AND/OR CONTAMINATION WARRANT IMMEDIATE RESPONSE BY TRAINED PROFESSIONALS. SUSPECTED JOB-SITE CONTAMINATION SHOULD BE IMMEDIATELY REPORTED TO REGULATORY AUTHORITIES AND PROTECTIVE ACTIONS TAKEN. SIGNIFICANT SPILLS SHOULD BE REPORTED WASTE MANAGEMENT HOUSEKEEPING PRACTICES TO THE NATIONAL RESPONSE CENTER (NRC) AT (800) 424-8802. TARGETED CONSTITUENTS PRIMARY USE THESE MANAGEMENT PRACTICES ALONG WITH APPLICABLE OSHA AND EPA GUIDELINES SHOULD BE INCORPORATED AT ALL CONSTRUCTION SITES THAT USE OR GENERATE HAZARDOUS WASTES. MANY CHEMICALS SUCH AS FUEL, OIL, GREASE, FERTILIZER, AND PESTICIDE ARE PRESENT AT MOST CONSTRUCTION SITES. SEDIMENT NUTRIENTS TOXIC MATERIALS OIL & GREASE INSTALLATION, APPLICATION AND DISPOSAL CRITERIA O FLOATABLE MATERIALS THE CHEMICAL MANAGEMENT TECHNIQUES PRESENTED HERE ARE BASED ON PROPER RECOGNITION, HANDLING, AND DISPOSAL PRACTICES BY CONSTRUCTION WORKERS AND SUPERVISORS. KEY ELEMENTS ARE EDUCATION, PROPER DISPOSAL PRACTICES, AS WELL AS PROVISIONS FOR SAFE STORAGE AND DISPOSAL FOLLOWING ARE LISTS DESCRIBING THE TARGETED MATERIALS AND RECOMMENDED PROCEDURES: OTHER CONSTRUCTION TARGETED CHEMICAL MATERIALS IMPLEMENTATION REQUIRMENTS CAPITAL COST WOOD PRESERVATIVES MAINTENANCE TRAINING PESTICIDES, HERBICIDES, & FERTILIZER O SUITABILITY FOR SLOPES > FUELS & LUBE OILS STORAGE PROCEDURES MINIMIZE GENERATION OF HAZARDOUS WASTES ON THE JOB-SITE.

SEGREGATE POTENTIALLY HAZARDOUS WASTE FROM NON HAZARDOUS CONSTRUCTION SITE DEBRIS. LEGEND SIGNIFICANT IMPACT DESIGNATE A FOREMAN OR SUPERVISOR TO OVERSEE HAZARDOUS MATERIALS LOW IMPACT KEEP CHEMICALS IN APPROPRIATE CONTAINERS (CLOSED DRUMS OR SIMILAR) AND UNDER COVER.
STORE CHEMICALS AWAY FROM DRAINAGE DITCHES, SWALES AND CATCH BASINS.
USE CONTAINMENT BERMS IN FUELING AND MAINTENANCE AREAS AND WHERE THE
POTENTIAL FOR SPILLS IS HIGH. UNKNOWN OR QUESTIONABLE IMPACT WASTE HANDLING

DEBRIS AND TRASH MANAGEMENT

ENSURE THAT ADEQUATE HAZARDOUS WASTE STORAGE VOLUME IS AVAILABLE.
ENSURE THAT HAZARDOUS WASTE COLLECTION CONTAINERS ARE CONVENIENTLY M-2DO NOT ALLOW POTENTIALLY HAZARDOUS WASTE MATERIALS TO ACCUMULATE.
ENFORCE HAZARDOUS WASTE HANDLING AND DISPOSAL PROCEDURES.
CLEARLY MARK ON ALL HAZARDOUS WASTE CONTAINERS WHICH MATERIALS ARE DISPOSAL PROCEDURES ENSURE THAT ADEQUATE CLEANUP AND CONTAINMENT MATERIALS ARE AVAILABLE ONSITE.

REGULARLY SCHEDULE HAZARDOUS WASTE REMOVAL TO MINIMIZE ON—SITE STORAGE.
USE ONLY LICENSED HAZARDOUS WASTE HAULERS.

APPLICATIONS

CONCRETE WASTE IS PRESENT AT MOST CONSTRUCTION SITES. THIS BMP SHOULD BE UTILIZED AT SITES IN WHICH CONCRETE WASTE IS PRESENT. PERMANENT STABILIZATION WASTE MANAGEMENT HOUSEKEEPING PRACTICES A NUMBER OF WATER QUALITY PARAMETERS CAN BE AFFECTED BY INTRODUCTION OF CONCRETE — ESPECIALLY FRESH CONCRETE. CONCRETE AFFECTS THE pH OF RUNOFF, CAUSING SIGNIFICANT CHEMICAL CHANGES IN WATER BODIES AND HARMING AQUATIC LIFE. SUSPENDED SOLIDS IN THE FORM OF BOTH CEMENT AND AGGREGATE DUST ARE ALSO GENERATED FROM BOTH FRESH AND DEMOLISHED CONCRETE WASTE. TARGETED CONSTITUENTS SEDIMENT NUTRIENTS TOXIC UNACCEPTABLE CONCRETE WASTE DISPOSL PRACTICES

DUMPING IN VACANT AREAS ON THE JOB-SITE.

ILLICIT DUMPING OFF-JOBSITE.

DUMPING INTO DITCHES OR DRAINAGE FACILITIES. MATERIALS O OIL & GREASE O FLOATABLE MATERIALS RECOMMENDED DISPOSAL PRACTICES OTHER CONSTRUCTION AVOID UNACCEPTABLE DISPOSAL PRACTICES LISTED ABOVE.

DEVELOP PREDETERMINED, SAFE CONCRETE DISPOSAL AREAS.

PROVIDE A WASHOUT AREA WITH A MINIMUM OF 6 CUBIC FEET OF CONTAINMENT AREA VOLUME FOR EVERY 10 CUBIC YARDS OF CONCRETE POURED. IMPLEMENTATION NEVER DUMP WASTE CONCRETE ILLICITLY OR WITHOUT PROPERTY OWNER'S KNOWLEDGE AND CONSENT. REQUIRMENTS OVERFLOW OF WASHDOWN WATER SHALL BE DISCHARGED IN AN AREA PROTECTED BY ONE OR MORE SEDIMENT REMOVAL BMPS AND SHALL BE DONE IN A MANNER THAT DOES NOT RESULT IN A VIOLATION OF GROUNDWATER OR SURFACE WATER QUALITY CAPITAL COST MAINTENANCE TRAINING DRIVERS AND EQUIPMENT OPERATORS SHOULD BE INSTRUCTED ON PROPER DISPOSAL SUITABILITY FOR SLOPES > AND EQUIPMENT WASHING PRACTICES (SEE ABOVE).
SUPERVISORS MUST BE MADE AWARE OF THE POTENTIAL ENVIRONMENTAL
CONSEQUENCES OF IMPROPERLY HANDLED CONCRETE WASTE. **LEGEND** THE CONSTRUCTION SITE MANAGER OR FOREMAN MUST ENSURE THAT EMPLOYEES AND PRE-MIX COMPANIES FOLLOW PROPER PROCEDURES FOR CONCRETE DISPOSAL AND EQUIPMENT WASHING. SIGNIFICANT IMPACT EMPLOYEES VIOLATING DISPOSAL OR EQUIPMENT CLEANING DIRECTIVES CRUST BE REEDUCATED OR DISCIPLINED IF NECESSARY. **● MEDIUM IMPACT** LOW IMPACT UNKNOWN OR MONITOR WEATHER AND WIND DIRECTION TO ENSUE CONCRETE DUST IS NOT QUESTIONABLE IMPACT ENTERING DRAINAGE STRUCTURES AND SURFACE WATER.
WHERE APPROPRIATE, CONSTRUCT SEDIMENT TRAPS OR OTHER TYPES OF SEDIMENT DETENTION DEVICES DOWNSTREAM OF DEMOLITION ACTIVITIES. QUIREMENTS

USE PREDETERMINED DISPOSAL SITES FOR WASTE CONCRETE.

PROHIBIT DUMPING WASTE CONCRETE ANYWHERE BUT PREDETERMINED AREAS.

ASSIGN PREDETERMINED TRUCK AND EQUIPMENT WASHING AREAS.

EDUCATE DRIVERS AND OPERATORS ON PROPER DISPOSAL AND EQUIPMENT CLEANING M-3MINIMAL COST IMPACT FOR TRAINING AND MONITORING,
CONCRETE DISPOSAL COST DEPENDS ON AVAILABILITY AND DISTANCE TO SUITABLE DISPOSAL AREAS
ADDITIONAL COSTS INVOLVED IN EQUIPMENT WASHING COULD BE SIGNIFICANT. CONCRETE WASTE MANAGEMENT IS ONE PART OF A COMPREHENSIVE CONSTRUCTION SITE WASTE MANAGEMENT PROGRAM. CHEMICAL MANAGEMENT **APPLICATIONS** PERIMETER CONTROL SLOPE PROTECTION INSTRUCT WORKERS ON SAFETY PROCEDURES FOR CONSTRUCTION SITE CHEMICAL STORAGE.
INSTRUCT WORKERS IN IDENTIFICATION OF CHEMICAL POLLUTANTS. SEDIMENT TRAPPING CHANNEL PROTECTION RESPONSE.
EDUCATE WORKERS OF POTENTIAL DANGERS TO HUMANS AND THE ENVIRONMENT FROM CHEMICAL POLLUTANTS.
EDUCATE ALL WORKERS ON CHEMICAL STORAGE AND DISPOSAL PROCEDURES.
HAVE REGULAR MEETINGS TO DISCUSS AND REINFORCE IDENTIFICATION, HANDLING, AND TEMPORARY STABILIZATION PERMANENT STABILIZATION WASTE MANAGEMENT DISPOSAL PROCEDURES (INCORPORATE IN REGULAR SAFETY SEMINARS).
ESTABLISH A CONTINUING EDUCATION PROGRAM TO INDOCTRINATE NEW EMPLOYEES. HOUSEKEEPING PRACTICES TARGETED CONSTITUENTS QUALITY ASSURANCE FOREMAN AND/OR CONSTRUCTION SUPERVISOR SHALL MONITOR ON-SITE CHEMICAL SEDIMENT STORAGE AND DISPOSAL PROCEDURES.
EDUCATE AND IF NECESSARY, DISCIPLINE WORKERS WHO VIOLATE PROCEDURES.
ENSURE THAT THE HAZARDOUS WASTE DISPOSAL CONTRACTOR IS REPUTABLE AND NUTRIENTS TOXIC OIL & GREASE FLOATABLE MATERIALS JOB-SITE CHEMICAL AND HAZARDOUS WASTE HANDLING AND DISPOSAL EDUCATION AND AWARENESS PROGRAM. COMMITMENT BY MANAGEMENT TO IMPLEMENT CHEMICAL STORAGE AND HAZARDOUS WASTE MANAGEMENT PRACTICES. OTHER CONSTRUCTION COMPLIANCE BY WORKERS.
SUFFICIENT AND APPROPRIATE CHEMICAL AND HAZARDOUS WASTE STORAGE CONTAINERS.
TIMELY REMOVAL OF STORED HAZARDOUS WASTE MATERIALS. IMPLEMENTATION REQUIRMENTS POSSIBLE MODEST COST IMPACT FOR ADDITIONAL CHEMICAL STORAGE CONTAINERS. CAPITAL COST SMALL COST IMPACT FOR TRAINING AND MONITORING.
POTENTIAL COST IMPACT FOR HAZARDOUS WASTE COLLECTION AND DISPOSAL BY
LICENSED HAULER — ACTUAL COST DEPENDS ON TYPE OF MATERIAL AND VOLUME. MAINTENANCE TRAINING O SUITABILITY FOR SLOPES : THIS PRACTICE IS NOT INTENDED TO ADDRESS SITE—ASSESSMENTS AND PRE—EXISTING CONTAMINATION. MAJOR CONTAMINATION, LARGE SPILLS AND OTHER SERIOUS HAZARDOUS WASTE INCIDENTS REQUIRE IMMEDIATE RESPONSE FROM SPECIALISTS. DEMOLITION ACTIVITIES AND POTENTIAL PRE-EXISTING MATERIALS, SUCH AS LEAD AND ASBESTOS, ARE NOT ADDRESSED BY THIS PROGRAM. SITE-SPECIFIC INFORMATION ON PLANS IS NECESSARY. **LEGEND** SIGNIFICANT IMPACT ■ MEDIUM IMPACT CONTAMINATED SOILS ARE NOT ADDRESSED. O LOW IMPACT UNKNOWN OR QUESTIONABLE IMPACT M-2

CONCRETE WASTE MANAGEMENT

CONCRETE WASTE AT CONSTRUCTION SITES COMES IN TWO FORMS: 1) EXCESS FRESH

CONCRETE MIX INCLUDING TRUCK AND EQUIPMENT WASHING, AND 2) CONCRETE DUST AND CONCRETE DEBRIS RESULTING FROM DEMOLITION. BOTH FORMS HAVE THE POTENTIAL TO IMPACT WATER QUALITY THROUGH STORM WATER RUNOFF CONTACT WITH THE WASTE.

MULCHING IS THE APPLICATION OF A LAYER OF CHOPPED STRAW, HAY, CHIPPED SITE VEGETATION, OR OTHER MATERIAL, WHICH IS SPREAD UNIFORMILY OVER BARREN AREAS TO REDUCE THE EFFECTS OF EROSION FROM RAINFALL. TYPES OF MULCH INCLUDE ORGANIC MATERIALS (E.G. COMPOST MIXTURES), STRAW, WOOD CHIPS, BARK, OR OTHER FIBERS. ANOTHER FROM OF MULCH, WHICH HAS BEEN COMMERCIALIZED, USES STRAW OR OTHER MATERIAL WITH ORGANIC AND INORGANIC BINDING SYSTEMS WHICH ARE TYPICALLY SPRAYED OVER THE CONTROL AREA. SOME OF THESE PRODUCTS MAY BE VERY EFFECTIVE ON STEEPER SLOPES WHERE THERE IS NO VEHICULAR OR FOOT TRAFFIC TO DISRUPT THE APPLICATION UNTIL VEGETATION IS ESTABLISHED. MULCH SHOULD NOT CONTAIN CHIPPED MANUFACTURED BOARDS OR CHEMICALLY TREATED WOOD SUCH AS PARTICLEBOARD, RAILROAD TIES OR SIMILAF TREATED WOOD. HAY SHOULD NOT BE USED AS A REPLACEMENT FOR STRAW UNLESS IT CAN BE DETERMINED THAT IT IS WEED AND SEED FREE.

MULCH IS USED TO TEMPORARILY AND/OR PERMANENTLY STABILIZE BARE OR FRESHLY SEEDED AREAS. IT PROTECTS THE SOIL FROM EROSION AND MOISTURE LOSS BY LESSENING THE EFFECTS OF WIND, WATER AND SUNLIGHT. IT ALSO DECREASES THE VELOCITY OF SHEET FLOW, THEREBY REDUCING THE VOLUME OF SEDIMENT-LADEN WATER FLOW LEAVING THE MULCHED MAINTENANCE

MULCH MAY BE USED ON MOST CONSTRUCTION—RELATED DISTURBED AREAS FOR SURFACE PROTECTION INCLUDING: AREAS AT RISK DUE TO THE TIME PERIOD BEING UNSUITABLE FOR GROWING AREAS THAT ARE NOT CONDUSIVE TO SEEDING OR PLANTING.

STEEP SLOPES (E.G. >3H:1V), PROVIDED THE MULCH IS ANCHORED TO THE SOIL BY USE OF A COMBINATION OF TACKIFIERS AND NETTING, OR CRIMPING. MULCH MAY BE USED BY ITSELF OR IN COMBINATION WITH NETTING OTHER ANCHORS TO PROMOTE SOIL STABILIZATION.

CHOICE OF MULCH DEPENDS LARGELY ON SLOPE, CLIMATE, AND SOIL TYPE IN ADDITION TO AVAILABILITY OF MATERIALS.

WULCH SHOULD BE APPLIED IN AN EVEN AND UNIFORM MANNER WHERE CONCENTRATED WATER FLOW IS NEGLIGIBLE. WATER FLOW IS REGLIGIBLE.

THE APPLICATION OF STRAW MULCH SHOULD BE APPROXIMATELY 2 TONS DRY STRAW PER

ACRE SPREAD UNIFORMLY ACROSS THE AREA. OTHER FORMS OF MULCH, SUCH AS WOOD

CHIPS OR CHOPPED SITE VEGETATION SHOULD BE PLACED IN THICKNESS OF TWO—INCHES OR GREATER OVER THE AREA.

STRAW MULCH SHOULD BE ANCHORED BY APPLICATION OF A FIBER MULCH BINDER, BY THE APPLICATION OF A SYNTHETIC LIQUID MULCH BINDER, BY USING A TRACTOR DRAWN CRIMPER TO PUNCH INTO THE SOIL, OR BY PLACING A NETTING ABOVE THE MULCH

CRIMPER TO PUNCH INTO THE SOLD OF THE STAPLED TO THE GROUND AS REQUIRED.

MULCH HYDRAULICALLY APPLIED WITH TACKIFIERS AND BINDING AGENTS IS COMMERCIALL.

MULCH HYDRAULICALLY APPLIED WITH TACKIFIERS AND BINDING AGENTS IS COMMERCIALL. ON SLOPES STEEPER THAN 2.5:1.
WOOD CHIPS ARE SUITABLE FOR AREAS THAT WILL NOT REQUIRE MOWING FREQUENTLY AND ARE HEAVY ENOUGH THAT THEY DO NOT REQUIRE ANCHORING. THEY DO, HOWEVER, DEPLETE NITROGEN FROM THE SOIL, WHICH IS A NECESSARY NUTRIENT FOR ALL PLANTS. O ALLEVIATE THIS CONDITION, WOOD CHIPS MUST BE TREATED WITH 12 POUNDS OF AMMONIUM NITRATE PER TON OF MULCH USED.

BARK CHIPS ARE POPULAR FOR ORNAMENTAL APPLICATIONS, AS THEY DO NOT REQUIRE ANCHORING, DO NOT DECOMPOSE VERY RAPIDLY AND SERVE AS AN EXCELLENT INSULATION MATERIAL. WHEN USING BARK CHIPS, IT IS NOT NECESSARY TO TREAT FOR NITROGEN DEFICIENCY OR TO FERTILIZE. MULCHING

COMPOST AND WOOD MULCH MIXTURES SHOULD BE A BLEND OF 50% UNTREATED WOOD MULCH WITH 50% COMPOST MEASURED BY VOLUME. WOOD MULCH SHOULD BE AS BLEND OF 50% ON REATED WOOD MULCH WITH 50% COMPOST MEASURED BY VOLUME. WOOD MULCH SHOULD BE LESS THAN OR EQUAL TO 5 IN. IN LENGTH WITH 95% PASSING A 2 IN. SCREEN AND LESS THAN 30% PASSING A 1 IN. SCREEN. THE COMPOST SHALL MEET THE PHYSICAL REQUIREMENTS SPECIFIED IN TABLE 1 OF TXDOT SPECIAL SPECIFICATION 105B, COMPOST, WHICH CAN BE FOUND IN APPENDIX F. PRIOR TO THE PLACEMENT OF ANY MULCH, THE AREA TO BE PROTECTED MUST BE GRADED IN ACCORDANCE WITH PLANS. FERTILIZATION AND SOIL TREATMENT SHOULD THEN BE DONE PRIOR TO PLACEMENT OF MULCH WITH THE EXCEPTIONS OF WHEN

PROPER APPLICATION AND MIXING ALONG WITH AVOIDING APPLICATIONS WHEN THERE IS A SIGNIFICANT PROBABILITY OF RAIN WILL REDUCE LIME RUNOFF.

SEED IS TO APPLIED BY MEANS OF HYDRO-SEED OR WHEN SEED IS DISTRIBUTED FOLLOWING STRAW MULCH SPREADING ORGANIC MULCHES MAY BE DISTRIBUTED BY HAND OR BY MECHANICAL MEANS, BUT TO BE EFFECTIVE A COMPLETE COVERING IS REQUIRED.
REFER TO THE TABLE ON THE FOLLOWING PAGE FOR ADDITIONAL GUIDANCE.

MULCHES ARE SUBJECT TO REMOVAL BY WIND OR WATER UNDER SEVERE CLIMATIC CONDITIONS. MULCHES LOWER THE SOIL TEMPERATURE, WHICH MAY RESULT IN LONGER SEED GERMINATION PERIODS. MULCH SHOULD NOT BE APPLIED WITHIN THE ORDINARY HIGH-WATER MARK OF SURFACE WATERS, AS IT CAN BE A POTENTIAL FLOATATION MATERIAL.

MAINTENANCE REQUIREMENTS MULCHED AREAS SHOULD BE INSPECTED REGULARLY (AT LEAST AS OFTEN AS REQUIRED BY THE TPDES CONSTRUCTION GENERAL PERMIT, APPENDIX A) FOR THIN OR BARE SPOTS CAUSED BY NATURAL DECOMPOSTION OR WEATHER RELATED EVENTS. MULCH IN HIGH TRAFFIC AREAS SHOULD BE REPLACED ON A REGULAR BASIS TO MAINTAIN UNIFORM PROTECTION. EXCESS MULCH SHOULD BE BROUGHT TO THE SITE AND STOCKPILED FOR USE DURING THE MAINTENANCE PERIOD TO DRESS PROBLEM SPOTS.

SPECIFICATIONS FOR CONSTRUCTION OF THIS ITEM MAY BE FOUND IN THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION—NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, SECTION 201.17 MULCHING.

MULCH STANDARDS AND GUIDELINES STANDARDS AIR-DRIED, FREE FROM UNDESIRABLE SEED AND FROM COARSE MATERIAL. COST-FFFECTIVE WHEN APPLIED WITH ADEQUATE STRAW THICKNESS. HAY CAN BE USED IF WEED AND SEED FREE. IN WINDY AREAS AND STEEP SLOPES, STRAW TONS PER ACRE. MUST BE HELD IN PLACE BY CRIMPING, USING A TACKIFIER, OR COVERING WITH NETTING. SHOULD INCLUDE GRADATION FROM FINE TO COURSE TO PROMOTE INTERLOCKING COST-EFFECTIVE MANNER OF DISPOSING OF VEGETATIVE DEBRIS FROM SITE. DO NOT PLACE IN AREAS SUBJECT TO FLOODING. DECOMPOSITION OF CHIPPED VEGETATION COMPLETES WITH NUTRIENTS 2"MINIMUM THICKNESS OVER AREA; APPROX 10 TONS PER ACRE. PROPERTIES. MAXIMUM SIZE 6 INCHES IN LENGTH IMPORTANT TO SUBSEQUENT GRASS ESTABLISHMEN MULCH MUST BE FREE OF WASTE MATERIALS SUCH AS PLASTIC BAG, METAL DEBRIS, ETC. COMPOST SHALL MEET 2"MINIMUM THICKNESS OVER AREA; APPROX 10 TONS PER ACRE. AND COMPOSITION OF WOOD MULCHES. DETERMINE
WHETHER THE PREPARATION INCLUDES WEED AND
SEED CONTROL. WOOD MULCHES ARE AN EXCELLENT AND COMPOST MIXTURE REQUIREMENTS (TABLE 1) NO GROWTH INHIBITING APPROX. 25-30 LBS APPLY WITH A HYDROMULCHER, FIBERS SHOULD BE HYDROMULCH PER 1000 SF OR 1500-2000 LBS PER ACRE. KEPT TO LESS THAN 3/4 INCH TO PREVENT CLOGGING EQUIPMENT. BEST USED IN CONJUNCTION WITH SEED AT TIME OF APPLICATION. BONDED FIBER MATRIX MAY BE PARTICULARY EFFECTIVE ON SLOPES STEEPER THAN 2.5:1. HYDRAULICALLY APPLIED FOLLOW THE BONDED FIBER MATRIX MULCH WITH TACKIFIERS MANUFACTURE'S RECOMMENDATIONS (TYPICALLY 3000 LBS PER ACRE OR GREATER)

VEGETATION

PROVIDE 4-8 INCHES OF TOPSOIL OVER ROCK, GRAVEL OR OTHERWISE UNSUITABLE SOILS. POOR QUALITY TOPSOIL SHOULD BE AMENDED WITH COMPOST BEFORE APPLYING SEED OR SOD. AMENDMENT SHOULD BE THREE PARTS OF TOPSOIL TO ONE PART COMPOST BY VOLUME THOROUGHLY BLENDED.

PLANT SELECTION, FERTILIZATION AND SEEDING USE ONLY HIGH QUALITY, USDA CERTIFIED SEED.

USE AN APPROPRIATE SPECIES OR SPECIES MIXTURE ADAPTED TO LOCAL CLIMATE, OIL CONDITIONS AND SEASON AS SHOWN BELOW, OR CONSULT WITH THE LOCAL OFFICE OF THE NATURAL RESOURCE CONSERVATION SERVICE (NRCS) OR ENGINEERING extension service as necessary for selection of propèr spécies and

APPLICATION TECHNIQUE IN THIS AREA.

SEEDING RATE SHOULD BE IN ACCORDANCE WITH THE TABLE BELOW OR AS RECOMMENDED BY THE NRCS OR ENGINEERING EXTENSION SERVICE. FERTILIZER SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S
RECOMMENDATION WITH PROPER SPREADER EQUIPMENT. TYPICAL APPLICATION RATE FOR 10-10-10 GRADE FERTILIZER IS 10 LBS. PER 1,000 FT^2.

IF HYDRO-SEEDING IS USED, DO NOT MIX SEED AND FERTILIZER MORE THAN 30 MINUTES BEFORE APPLICATION.

EVENLY APPLY SEED USING CYCLONE SEEDER, SEED DRILL, CULLPACKER,

TERRASEEDING OR HYDROSEEDER.

PROVIDE ADEQUATE WATER TO AID IN ESTABLISHMENT OF VEGETATION. USE APPROPRIATE MULCHING TECHNIQUES WHERE NECESSARY, ESPECIALLY DURING COLD PERIODS OF THE YEAR.

SOD SHALL BE ST. AUGUSTINE GRASS, COMMON BERMUDAGRASS, BUFFALO GRASS, AN APPROVED HYBRID OF COMMON BERMUDAGRASS OR AN APPROVED ZOYSLAGRASS THE SOD SHOULD BE MOWED PRIOR TO SOD CUTTING SO THAT THE HEIGHT OF THE GRASS SHALL NOT EXCEED 2-INCHES AND SHOULD NOT BE HARVESTED OR PLANTED WHEN ITS MOISTURE CONDITION IS SO EXCESSIVELY WET OR DRY THAT IT'S SURVIVAL SHALL BE AFFECIED.

SOD SHALL BE PLANTED WITHIN 3 DAYS AFTER IT IS EXCAVATED.

IN AREAS SUBJECT TO DIRECT SUNLIGHT, PRE-MOISTEN PREPARED SOD BED BY WATERING IMMEDIATELY PRIOR TO PLACING SOD.

SODDED AREAS SHALL BE THOROUGHLY WATERED IMMEDIATELY AFTER THEY ARE

DDITIONAL GUIDANCE

ESTABLISHING A GOOD VEGETATIVE COVER IS DEPENDENT OF THE SEASON OF THE YEAR. PROJECTS THAT COMMENCE IN THE FALL OF THE YEAR MAY NOT BE CANDIDATES FOR VEGETATION USED AS A BMP.

WHERE VEGETATION IS USED IN SWALES AND CHANNELS IT MAY BE NECESSARY TO USED SOD, RATHER THAN SEEDING, TO ESTABLISH AN EROSION RESISTANT SURFACE TO ACCOMMODATE RAINFALL RUNOFF FLOWS.

WHERE VEGETATION IS USED FOR PERIMETER CONTROL, THE USE OF SOD IS NECESSARY FOR A FIFTEEN-FOOT WIDTH.

MULCH SHOULD BE USED TO ENHANCE VEGETATIVE GROWTH, IN THAT MULCH PROTECTS SEEDS FROM HEAT, PREVENTS SOIL MOISTURE LOSS, AND PROVIDE EROSION PROTECTION UNTIL THE VEGETATION IS ESTABLISHED.

FERTILIZERS HAVE BOTH BENEFICIAL AND ADVERSE EFFECTS. FERTILIZERS PROVIDE NUTRIENTS TO THE VEGETATION, BUT ALSO FERTILIZERS ARE A SOURCE OF NUTRIENTS TO STREAMS AND LAKES. IN THIS LATTER REGARD THEY ARE A POLLUTANT. THE USE OF NATIVE VEGETATION RATHER THAN EXOTICS REDUCES THE NEED OF FERTILIZER. ORGANIC FERTILIZERS ARE GENERALLY PREFERRED OVER CHEMICAL FERTILIZERS FROM THE STANDPOINT OF ENVIRONMENTAL CONDITIONS.

STEEP SLOPES REPRESENT A PROBLEM FOR ESTABLISHING VEGETATION. BONDED ADDITIONAL GUIDANCE

TEMPORARY VEGETATION THE TABLE ON THE FOLLOWING PAGE LISTS RECOMMENDED PLANT SPECIES FOR THE NORTH CENTRAL TEXAS REGION DEPENDING ON THE SEASON FOR PLANTING.

STEEP SLOPES REPRESENT A PROBLEM FOR ESTABLISHING VEGETATION. BONDE

FIBER MATRIX OR MECHANICALLY BONDED FIBER MATRIX PRODUCTS APPLIED WITH A TACKIFIER ARE USEFUL FOR ESTABLISHING VEGETATION ON SLOPES.

VEGETATION

RECOMMENDED GRASS MIXTURE FOR TEMPORARY EROSION CONTROL: COMMON NAME RATE (LBS/ACRE) AUG 15-NOV 30 TALL FESCUE WESTERN WHEAT GRAS WHEAT (RED. WINTER) FOXTAIL MILLET 30.0 MAY 1-AUG 31 FEB 15-MAY 31 ANNUAL RYE 20.0 SEP 1-DEC 31

PERMANENT VEGETATION
GRASS SEED FOR PERMANENT VEGETATION CAN BE SOWN AT THE SAME TIME AS SEEDING FOR TEMPORARY (ANNUAL) VEGETATION. DROUGHT TOLERANT NATIVE VEGETATION IS RECOMMENDED RATHER THAN EXOTICS AS A LONG-TERM WATER CONSERVATION MEASURE. NATIVE GRASSES CAN BE PLANTED AS SEED OR PLACED AS SOD. BUFFALOE 609, FOR EXAMPLE, IS A HYBRID GRASS THAT IS PLACED AS SOD. FERTILIZERS ARE NOT NORMALLY USED TO ESTABLISH NATIVE GRASSES, BUT MULCHING IS EFFECTIVE IN RETAINING SOIL MOISTURE FOR THE NATIVE PLANTS.

RECOMMENDED NATIVE GRASSES FOR PERMANENT EROSION CONTROL:

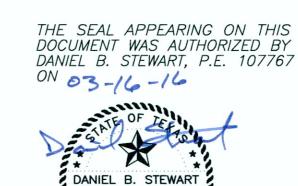
RATE GRASS BUFFALOE GRASS FULL TURF APPLICATION 3-4 lbs./1000 sqft. BLUE GRAMA FULL TURF APPLICATION 2 lbs./1000 sqft. SIDE OATS GRAMA APPLIED WITH OTHER NATIVE SEED 1/4 lb./1000 sqft.

VEGETATION IS NOT APPROPRIATE FOR AREAS SUBJECTED TO HEAVY PEDESTRIAN OR VEHICULAR TRAFFIC. AS A TEMPORARY TECHNIQUE, VEGETATION MAY BE COSTLY WHEN COMPARED TO OTHER TECHNIQUES. VEGETATION MAY REQUIRE A PERIOD OF DAYS TO WEEKS BEFORE BECOMING ESTABLISHED. LACK OF WATER AND LACK OF OR IMPROPER USE OF SOIL AMENDMENTS (COMPOST, FERTILIZER, ETC.) WILL USUALLY RESULT IN POOR TURF ESTABLISHMENT. ALTERNATE EROSION CONTROL (E.G. MULCHING, SODDING VEGETATIVE TRIPS, ETC) SHOULD BE USED UNTIL VEGETATION CAN BE ESTABLISHED.

VEGETATION IS NOT APPROPRIATE FOR ROCK, GRAVEL OR COARSE GRAINED SOILS UNLESS 4 TO 6 INCHES OF TOPSOIL IS APPLIED. MAINTENANCE REQUIREMENTS

PROTECT NEWLY SEEDED AREAS FROM EXCESSIVE RUNOFF AND TRAFFIC UNTIL VEGETATION IS ESTABLISHED. A WATERING AND FERTILIZING SCHEDULE WILL BE REQUIRED AS PART OF THE SWPPP TO ASSIST IN THE ESTABLISHMENT OF THE VEGETATION. VEGETATION SHOULD BE INSPECTED REGULARLY (AT LEAST AS OFTEN AS REQUIRED BY THE TPDES CONSTRUCTION GENERAL PERMIT, APPENDIX A) TO ENSURE THAT THE PLANT MATERIAL IS ESTABLISHED PROPERLY AND REMAINS HEALTHY. BARE SPOTS SHALL BE RESEEDED AND/OR PROTECTED FROM EROSION BY MATCH OR OTHER BMP, ACCUMULATED SEDIMENT DEPOSITED BY RUNOFF SHOULD BE REMOVED TO PREVENT SMOTHERING OF THE VEGETATION. IN ADDITION, DETERMINE THE SOURCE OF EXCESS SEDIMENT AND IMPLEMENT APPROPRIATE BMPS TO CONTROL THE EROSION.

RECORD DRAWING DATE 06-26-17



107767

CENSED

REV. DATE REMARKS

EROSION CONTROL DETAILS

APPLICATIONS

PERIMETER CONTROL

SLOPE PROTECTION

SEDIMENT TRAPPING

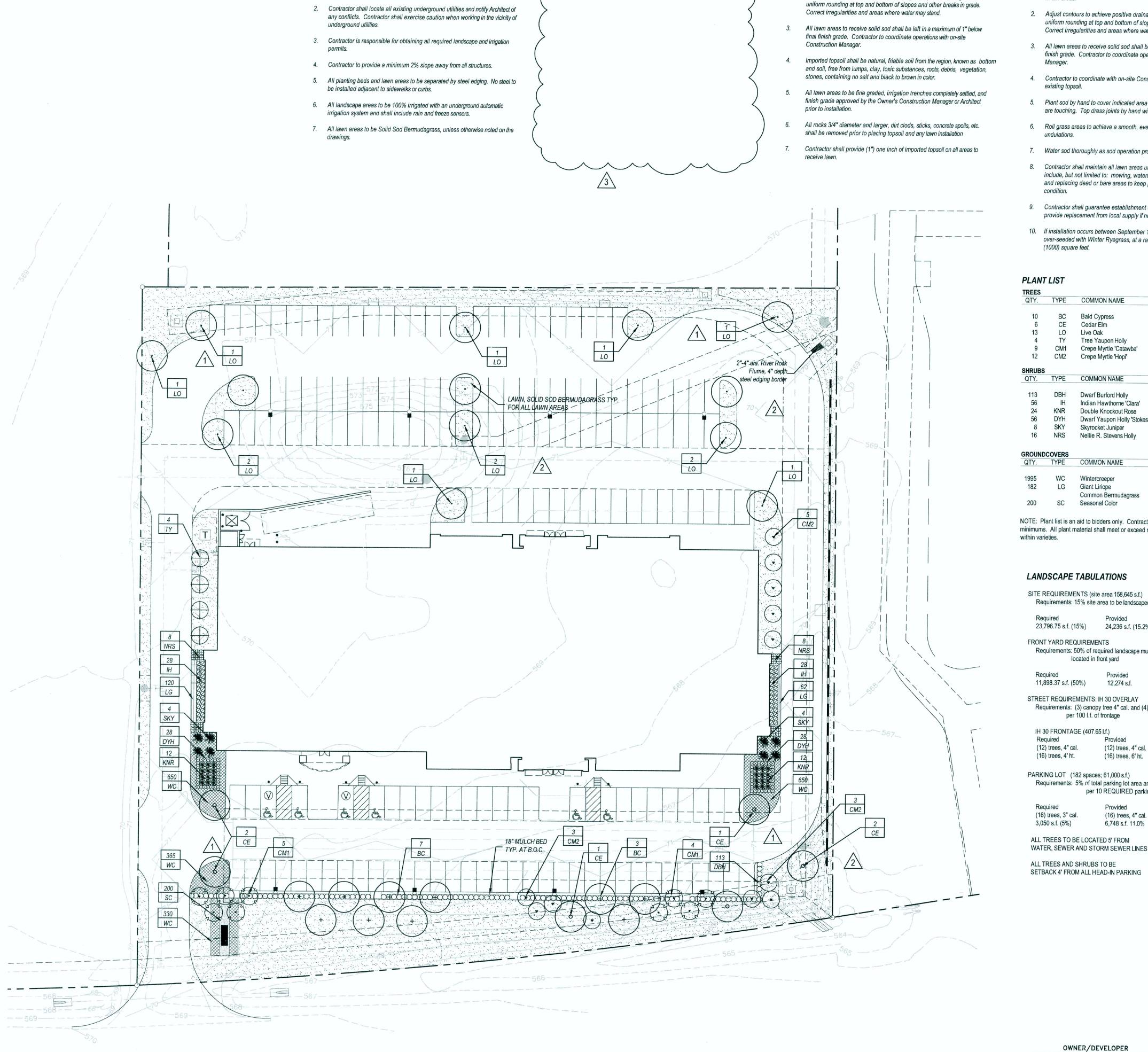
CHANNEL PROTECTION

TEMPORARY STABILIZATION

ROOMS TO GO

N.E.Q. I.H. 30 & GREENCREST BOULEVARD

THE CITY OF ROCKWALL, TEXAS 14800 Quorum Drive, Suite 200 Dallas, Texas 75254 972.385.2272 TBPE F-3751 **CATES-CLARK** DESIGN | DRAWN | DATE | SCALE | NOTES | FILE NO. 112-009 CCA CCA 02/22/16 N.T.S. ASC C10.3 DETAILS



LANDSCAPE NOTES

supplied by others.

Contractor shall verify all existing and proposed site elements and notify

Architect of any discrepancies. Survey data of existing conditions was

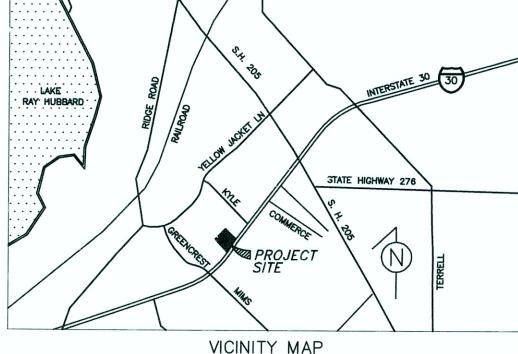
SOLID SOD NOTES

GENERAL LAWN NOTES

1. Fine grade areas to achieve final contours indicated on civil plans.

Adjust contours to achieve positive drainage away from buildings. Provide

- 1. Fine grade areas to achieve final contours indicated. Leave areas to receive topsoil 3" below final desired grade in planting areas and 1" below final grade in turf areas.
- 2. Adjust contours to achieve positive drainage away from buildings. Provide uniform rounding at top and bottom of slopes and other breaks in grade. Correct irregularities and areas where water may stand.
- 3. All lawn areas to receive solid sod shall be left in a maximum of 1" below final finish grade. Contractor to coordinate operations with on-site Construction
- 4. Contractor to coordinate with on-site Construction Manager for availability of existing topsoil.
- 5. Plant sod by hand to cover indicated area completely. Insure edges of sod are touching. Top dress joints by hand with topsoil to fill voids.
- 6. Roll grass areas to achieve a smooth, even surface, free from unnatural
- 7. Water sod thoroughly as sod operation progresses.
- 8. Contractor shall maintain all lawn areas until final acceptance. This shall include, but not limited to: mowing, watering, weeding, cultivating, cleaning and replacing dead or bare areas to keep plants in a vigorous, healthy
- 9. Contractor shall guarantee establishment of an acceptable turf area and shall provide replacement from local supply if necessary.
- 10. If installation occurs between September 1 and March 1, all sod areas to be over-seeded with Winter Ryegrass, at a rate of (4) pounds per one thousand (1000) square feet.



NOT-TO-SCALE

SITE DATA

LOT AREA: 3.64 ACRES (158,645 SF) ZONING: C-COMMERCIAL W/ I.H. 30 OVERLAY CURRENT USE: UNDEVELOPED PROPOSED USE: **GENERAL RETAIL**

BUILDING AREA: 40,590 SQ. FT. PARKING REQUIRED: 163 SPACES (6 HC) PARKING PROVIDED: 182 SPACES (6 HC) PARKING RATIO: (1/224) (4.4/1,000)

PLANT LIST

IKEES					
QTY.	TYPE	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
10	ВС	Bald Cypress	Taxodium distichum	4" cal.	container around 451 bt 51
6	CE	Cedar Elm	Ulmus crassifolia	4 cal. 4" cal.	container grown, 15' ht. 5' spread min.
13	LO	Live Oak			container grown, 15' ht., 5' spread min.
4	TY	Tree Yaupon Holly	Quercus virginiana Ilex vomitoria	4" cal.	container grown, 15' ht., 5' spread min.
9	CM1	Crepe Myrtle 'Catawba'		6' ht.	B&B, 3 cane, tree form, no cross caning
12			Lagerstroemia indica 'Catawba'	6' ht.	container grown, 3-5 cane, no cross caning
12	CM2	Crepe Myrtle 'Hopi'	Lagerstroemia indica 'Hopi'	5' ht.	container grown, 3-5 cane, no cross caning
SHRUBS	i.				
QTY.	TYPE	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
113	DBH	Dwarf Burford Holly	llex cornuta 'Burfordii nana'	5 gal.	container, full plant, 36" o.c.
56	IH	Indian Hawthorne 'Clara'	Raphiolepis indica 'Clara'	5 gal.	container, full plant, 24" o.c.
24	KNR	Double Knockout Rose	Rosa sp. 'Double Knockout'	5 gal.	container, full plant, 36" o.c.
56	DYH	Dwarf Yaupon Holly 'Stokes'	llex vomitoria nana 'Stokes'	5 gal.	container, full plant, 24" o.c.
8	SKY	Skyrocket Juniper	Juniperus sp. 'skyrocket'	5' ht.	container, full plant, 24 o.c.
16	NRS	Nellie R. Stevens Holly	llex sp. ' Nellie R. Stevens'	10 gal.	container, full to base
		Trainer in Claration (Inclin)	nox sp. Welle N. Glevens	io gai.	container, full to base
ROUND	COVERS				
QTY.	TYPE	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
4005	111/0	147	_		
1995	WC	Wintercreeper	Euonymus fortunei coloratus	4" pots	container, (3) 12" runners min. 12" o.c.
182	LG	Giant Liriope	Liriope gigantea	4"pots	container, full top of container, 12" o.c.
		Common Bermudagrass	Cynodon dactylon	roll sod	solid sod, refer to notes
200	SC	Seasonal Color	***		container, full plant, 12" o.c.

NOTE: Plant list is an aid to bidders only. Contractor shall verify all quantities on plan. All heights and spreads are minimums. All plant material shall meet or exceed remarks as indicated. All trees to have straight trunks and be matching within varieties.

LANDSCAPE TABULATIONS

SITE REQUIREMENTS (site area 158,645 s.f.) Requirements: 15% site area to be landscaped

23,796.75 s.f. (15%) 24,236 s.f. (15.2%)

FRONT YARD REQUIREMENTS

Requirements: 50% of required landscape must be located in front yard

11,898.37 s.f. (50%) 12,274 s.f.

STREET REQUIREMENTS: IH 30 OVERLAY Requirements: (3) canopy tree 4" cal. and (4) accent trees, 4' ht. per 100 l.f. of frontage

IH 30 FRONTAGE (407.65 l.f.) (12) trees, 4" cal. (12) trees, 4" cal.

PARKING LOT (182 spaces; 61,000 s.f.) Requirements: 5% of total parking lot area and (1) tree, 4" cal. per 10 REQUIRED parking spaces (162 REQUIRED)

(16) trees, 6' ht.

(16) trees, 4" cal. (16) trees, 3" cal. 6,748 s.f. 11.0% ALL TREES TO BE LOCATED 5' FROM

ALL TREES AND SHRUBS TO BE SETBACK 4' FROM ALL HEAD-IN PARKING

OWNER/DEVELOPER SEAMAN DEVELOPMENT CORPORATION

400 PERIMETER CENTER TERRACE, SUITE 800 ATLANTA, GEORGIA 30346

(678) 338-4566

CONTACT: JEFF FINKEL

RECORD DRAWING DATE 06-26-17

1 LANDSCAPE PLAN SCALE: 1" = 30'-0"

1708 N. Griffin Street Dallas, Texas 75202 Tel 214.871.0083 Fax 214.871.0545 Email smr@smr-la.com

SP2016-0___

landscape architects, inc.

smr





LANDSCAPE PLAN ROOMS TO GO

N.E.Q. I.H. 30 & GREENCREST BOULEVARD

THE CITY OF ROCKWALL, TEXAS **CATES-CLARK**

DESIGN DRAWN DATE | SCALE | NOTES FILE 112-009 SITE 01/15/16 1"=30" ASC

SECTION 02900 - LANDSCAPE

PART 1 - GENERAL

1.1 REFERENCED DOCUMENTS

Refer to bidding requirements, special provisions, and schedules for additional requirements.

1.2 DESCRIPTION OF WORK

Work included: Furnish all supervision, labor, materials, services, equipment and appliances required to complete the work covered in conjunction with the landscaping covered in these specifications and landscaping plans, including:

- Planting (trees, shrubs, and grass) Bed preparation and fertilization
- Notification of sources Water and Maintenance until final acceptance Guarantee

1.3 REFERENCE STANDARDS

- A. American Standard for Nursery Stock published by American Association of Nurserymen: 27 October 1980, Edition; by American National Standards Institute, Inc. (Z60.1) - plant
- B. American Joint Committee on Horticultural Nomenclature: 1942 Edition of Standardized
- Texas Association of Nurserymen, Grades and Standards.
- D. Hortis Third, 1976 Cornell University

1.4 NOTIFICATION OF SOURCES AND SUBMITTALS

- A. The Contractor shall, within ten (10) days following acceptance of bid, notify the Architect/Owner of the sources of plant materials and bed preparation required for the
- B. Samples: Provide representative quantities of sandy loam soil, mulch, bed mix material, gravel, and crushed stone. Samples shall be approved by Architect before use on
- Product Data: Submit complete product data and specifications on all other specified
- D. Submit three representative samples of each variety of ornamental trees, shrubs, and groundcover plants for Architect's approval. When approved, tag, install, and maintain as representative samples for final installed plant materials.
- File Certificates of Inspection of plant material by state, county, and federal authorities
- F. Soil Analysis: Provide sandy loam soil analysis if requested by the Architect.

PART 3 - EXECUTION

3.1 BED PREPARATION & FERTILIZATION

- Landscape Contractor to inspect all existing conditions and report any deficiencies to the
- B. All planting areas shall be conditioned as follows:
 - 1. Prepare new planting beds by scraping away existing grass and weeds as necessary. Till existing soil to a depth of six (6") inches prior to placing compost and fertilizer. Apply fertilizer as per manufacturers recommendations. Add six (6") inches of compost and till into a depth of six (6") inches of the topsoil. Apply organic fertilizer such as Sustane or Green Sense at the rate of twenty (20) pounds per one thousand (1,000) square feet.
- 2. All planting areas shall receive a two (2") inch layer of specified mulch. 3. Backfill for tree pits shall be as follows: Use existing top soil on site (use imported topsoil as needed) free from large clumps, rocks, debris, caliche, subsoils, etc., placed in nine (9") inch layers and watered in thoroughly.

- 1. Areas to be Solid Sod Bermudagrass: Blocks of sod should be laid joint to joint smooth, even surface. The joints between the blocks of sod should be filled with topsoil where they are evidently gaped open, then watered thoroughly.
- 2. Areas to be Hydromulch Common Bermudagrass: Hydromulch with bermudagrass seed at a rate of two (2) pounds per one thousand (1,000) square feet. Use a 4' x 8' batter board against the bed areas.

3.2 INSTALLATION

- A. Maintenance of plant materials shall begin immediately after each plant is delivered to the site and shall continue until all construction has been satisfactorily accomplished.
- Plant materials shall be delivered to the site only after the beds are prepared and area ready for planting. All shipments of nursery materials shall be thoroughly protected from the drying winds during transit. All plants which cannot be planted at once, after delivery to the site, shall be well protected against the possibility of drying by wind and sun. Balls of earth of B & B plants shall be kept covered with soil or other acceptable material. All plants remain the property of the Contractor until final acceptance.
- Position the trees and shrubs in their intended location as per plan.
- Notify the Landscape Architect for inspection and approval of all positioning of plant
- Excavate pits with vertical sides and horizontal bottom. Tree pits shall be large enough to permit handling and planting without injury to balls of earth or roots and shall be of such depth that, when planted and settled, the crown of the plant shall bear the same relationship to the finish grade as it did to soil surface in original place of growth.

JOB CONDITIONS

- General Contractor to complete the following punch list: Prior to Landscape Contractor initiating any portion of landscape installation, General Contractor shall leave planting bed areas three (3") inches below finish grade of sidewalks, drives and curbs as shown on the drawings. All lawn areas to receive solid sod shall be left one (1") inch below the finish grade of sidewalks, drives, and curbs. All construction debris shall be removed prior to Landscape Contractor beginning any work.
- General Contractor shall provide topsoil as described in Section 02200 Earthwork
- Storage of materials and equipment at the job site will be at the risk of the Landscape ontractor. The Owner cannot be held responsible for theft or damage.

1.6 MAINTENANCE AND GUARANTEE

A. Maintenance:

- The Landscape Contractor will be held responsible for the maintenance of all work from the time of planting until final acceptance by the Owner. No trees, shrubs, groundcover or grass will be accepted unless they show a healthy growth and satisfactory foliage conditions.
- Maintenance shall include watering of trees and plants, cultivation, weeding spraying, edging, pruning of trees, mowing of grass, cleaning up and all other work necessary of maintenance.
- 3. A written notice requesting final inspection and acceptance should be submitted to the Owner at least seven (7) days prior to completion. An on-site inspection by Owner and Landscape Contractor will be completed prior to written acceptance.
- 4. After final acceptance of installation, the Landscape Contractor will not be required to do any of the above listed work.

B. Guarantee:

- 1. Trees shall be guaranteed for a twelve (12) month period after acceptance. Shrubs and groundcover shall be guaranteed for twelve (12) months. The Contractor shall replace all dead materials as soon as weather permits and upon notification of the Owner. Plants, including trees, which have partially died so that shape, size, or symmetry has been damaged, shall be considered subject to replacement. In such cases, the opinion of the Owner shall be final.
- a. Plants used for replacement shall be of the same size and kind as those originally planted and shall be planted as originally specified. All work, including materials, labor and equipment used in replacements, shall carry a twelve (12) month guarantee. Any damage, including ruts in lawn or bed areas, incurred as a result of making replacements shall be immediately
- b. At the direction of the Owner, plants may be replaced at the start of the next year's planting season. In such cases, dead plants shall be removed from the premises immediately
- c. When plant replacements are made, plants, soil mix, fertilizer and mulch are to be utilized as originally specified and reinspected for full compliance with Contract requirements. All replacements are to be included under "Work" of this section.

Shrub and tree pits shall be no less than two (2') feet, twenty-four (24") inches, wider than

Remove and haul from site all rocks and stones over one (1") inch in diameter. Plants

Dig a wide, rough sided hole exactly the same depth as the height of the ball, especially at

the surface of the ground. The sides of the hole should be rough and jagged, never slick

Percolation Test: Fill the hole with water. If the water level does not percolate within 24

Backfill only with 5 parts existing soil or sandy loam and 1 part bed preparation. When

settle by watering to prevent air pockets. Remove the burlap from the top 1/3 of the ball.

Mulch the top of the ball. Do not plant grass all the way to the trunk of the tree. Leave the

area above the top of the ball and mulch with at least two (2") inches of specified mulch.

section, alternate locations may be selected by the Owner. Where locations cannot be

properly set at the required grade. The work of this section shall include the removal from

changed, the obstructions shall be removed to a depth of not less than three (3') feet below grade and no less than six (6") inches below the bottom of ball when plant is

the site of such rock or underground obstructions encountered at the cost of the

Trees and large shrubs shall be staked as site conditions require. Position stakes to

Pruning and Mulching: Pruning shall be directed by the Architect and shall be pruned in

accordance with standard horticultural practice following Fine Pruning, Class I pruning

tipping of the branched is not permitted. Do not cut terminal branches.

. Dead wood or suckers and broken badly bruised branches shall be removed. General

3. Immediately after planting operations are completed, all tree pits shall be covered with

a layer of organic material two (2") inches in depth. This limit of the organic material

1. Curbing shall be aligned as indicated on plans. Stake out limits of steel curbing and

Top of curbing shall be 3/4" maximum height above grade.
 Stakes are to be installed on the planting bed side of the curbing, as opposed to the

Storage areas for all materials shall be so organized that they, too, are neat and orderly

All trash and debris shall be removed from the site as work progresses. Keep paved

All plant beds and trees to be mulched with a minimum settled thickness of two (2")

N. Obstruction below ground: In the event that rock, or underground construction work or obstructions are encountered in any plant pit excavation work to be done under this

the hole is dug in solid rock, topsoil from the same area should not be used. Carefully

as well as all nylon, plastic string and wire mesh. Container trees will usually be pot

stand pipe per tree planting detail as approved by the Landscape Archite

bound, if so follow standard nursery practice of 'root scoring'.

J. Do not wrap trees.

nches over the entire bed or pit.

secure tree against seasonal prevailing winds

standards provided by National Arborist Association.

2. Pruning shall be done with clean, sharp tools.

obtain Owners approval prior to installation

grass side.

2. Do not install steel edging along sidewalks.

All steel curbing shall be free of kinks and abrupt bends.

areas clean by sweeping or hosing at end of each days work.

Cut steel edging at 45 degree angle where edging meets sidewalk.

A. Cleanup: During the work, the premises shall be kept neat and orderly at all times.

END OF SECTION

Steel Curbing Installation:

3.3 CLEANUP AND ACCEPTANCE

hours, the tree needs to move to another location or have drainage added. Install a PVC

should be thoroughly moist before removing containers.

he lateral dimension of earth ball and six (6") inches deeper than it's vertical dimension.

- 2. The Owner agrees that for the guarantee to be effective, he will water plants at least twice a week during dry periods and cultivate beds once a month after final
- 3. The above guarantee shall not apply where plants die after acceptance because of injury from storms, hail, freeze, insects, diseases, injury by humans, machines or
- 4. Acceptance for all landscape work shall be given after final inspection by the Owner provided the job is in a completed, undamaged condition, and there is a stand of grass in all lawn areas. At this time, the Owner will assume maintenance on the
- Repairs: Any necessary repairs under the Guarantee must be made within ten (10) days after receiving notice, weather permitting, and in the event the Landscape Contractor does not make repairs accordingly, the Owner, without further notice to Contractor, may provide materials and men to make such repairs at the expense of the Landscape

1.7 QUALITY ASSURANCE

- General: Comply with applicable Federal, State, County and Local regulations governing landscape materials and work
- Personnel: Employ only experienced personnel who are familiar with the required work.
- Provide full time supervision by a qualified foreman acceptable to Landscape Architect.
 - 1. Make contact with suppliers immediately upon obtaining notice of contract acceptance to select and book materials. Develop a program of maintenance (pruning and fertilization) which will insure the purchased materials will meet and/or exceed project specifications.
 - 2. Landscape Architect will provide a key identifying each tree location on site. Written verification will be required to document material selection, source and delivery schedules to site. 3. Owner and/or Architect shall inspect all plant materials when reasonable at place of
 - growth for compliance with requirements for genus, species, cultivar/variety, size and 4. Owner and/or Architect retains the right to further inspect all plant material upon

arrival at the site and during installation for size and condition of root balls, limbs,

branching habit, insects, injuries, and latent defects 5. Owner and/or Architect may reject unsatisfactory or defective material at any time during the process of work. Remove rejected materials from the site immediately. Plants damaged in transit or at job site shall be rejected.

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING

Preparation:

4" DIA. PERFORATED

PVC PIPE W/ CAP -PAINTED BLACK

2X DIAMETER

NOT TO SCALE

OF ROOTBAL

(01) TREE PLANTING DETAIL

1. Balled and Burlapped (B&B) Plants: Dig and prepare shipment in a manner that will not damage roots, branches, shape, and future development 2. Container Grown Plants: Deliver plants in rigid container to hold ball shape and protect root mass.

- Deliver packaged materials in sealed containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and while stored
- 2. Deliver only plant materials that can be planted in one day unless adequate storage
- and watering facilities are available on job site. 3. Protect root balls by heeling in with sawdust or other approved moisture retaining
- material if not planted within 24 hours of delivery. 4. Protect plants during delivery to prevent damage to root balls or desiccation of leaves. Keep plants moist at all times. Cover all materials during transport.
- 5. Notify Architect of delivery schedule 72 hours in advance so plant material may be observed upon arrival at job site.
- 6. Remove rejected plant material immediately from site. 7. To avoid damage or stress, do not lift, move, adjust to plumb, or otherwise

manipulate plants by trunk or stems.

PART 2 - PRODUCTS

2.1 PLANTS

B = ON CENTER SPACING

SPACE PLANTS IN A TRIANGULAR

FROM EACHOTHER AT SPACING

PLANTING GROUNDCOVER/ANNUALS.

PREPARE GROUNDCOVER

BED BY TILLING ENTIRE BED -AREA. PROVIDE SOIL MIX

AS DEFINED IN THE LANDSCAPE

INDICATED ON PLANT LIST

MULCH IN BED PRIOR TO -

SPECIFICATIONS

- DO NOT CUT CENTRAL LEADER

- REFERENCE PLAN FOR TREE TYPE

2 STRANDS NO. 12 GAUGE

-2" HIGH WATERING RING

(3) METAL T-POST PAINTED

GREEN TRIANGULAR SPACING.

FINISH GRADE SCARIFY SIDES

ROOTBALL, DO NOT DISTURB, TOP - OF ROOTBALL TO BE SET 1" ABOVE EXISTING GRADE. REMOVE TOP 1/3 BURLAP.

NATIVE SOIL, REF. SPECIFICATIONS

NOTE: LOCATE STAKES OUTSIDE

OF TREE WELL, POSITION STAKES

TO SECURE TREE AGAINST SEASONAL

-CRUSHED ROCK

PREVAILING WINDS.

3" LAYER MULCH, REF. SPECIFICATIONS

PULL MULCH AWAY FROM TRUNK 3" ALL THE WAY AROUND

GROUNDCOVER PLANTING DETAIL

PATTERNAS SHOWN, SPACED EQUALLY

2" MULCH DOUBLE SHREDDED HARDWOOD

- General: Well-formed No. 1 grade or better nursery grown stock. Listed plant heights are from tops of root balls to nominal tops of plants. Plant spread refers to nominal oute width of the plant, not to the outer leaf tips. Plants will be individually approved by the Architect and his decision as to their acceptability shall be final.
- B. Quantities: The drawings and specifications are complimentary. Anything called for on one and not the other is as binding as if shown and called for on both. The plant schedule is an aid to bidders only. Confirm all quantities on plan.
- Quality and size: Plant materials shall conform to the size given on the plan, and shall be healthy, symmetrical, well-shaped, full branched, and well rooted. The plants shall be free from injurious insects, diseases, injuries to the bark or roots, broken branches,

objectionable disfigurements, insect eggs and larvae and are to be of specimen quality.

- Approval: All plant materials shall be subject to the approval of the Owner. All plants which are found unsuitable in growth, or in any unhealthy, badly shaped, or undersized condition, will be rejected by the Landscape Architect, either before or after planting, and shall be removed at the expense of the Landscape Contractor and replaced with
- acceptable plants as specified. Trees shall be healthy, full-branched, well-shaped and shall meet the trunk diameter and height requirements of the plant schedule. Balls shall be firm, neat, slightly tapered, and well wrapped in burlap. Any tree loose in the ball or with broken ball at time of planting will be rejected. Balls shall be ten (10") inched in diameter for each one (1") inch of trunk
- diameter, Measured six (6") inched above ball. Nomenclature conforms to the customary nursery usage: for clarification, the term "multi-trunk" defines a plant having three (3) or more trunks of nearly equal diameter
- Pruning: All pruning of trees and shrubs, as directed by the Landscape Architect, shall be executed by the Landscape Contractor at no additional cost to the Owner.

EDGE OF BED

PLANT ROW SPACING 'D' ROW SPACING 'A' PLANTS/10SF

2.2 SOIL PREPARATION MATERIALS

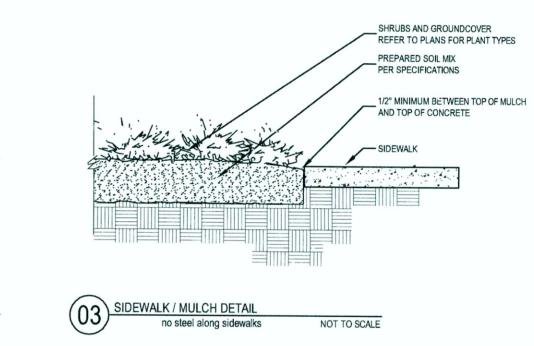
- A. Sandy Loam:
- 1. Friable, fertile, dark, loamy soil, free of clay lumps, subsoil, stones and other extraneous material and reasonably free of weeds and foreign grasses. Loam
- containing Dallasgrass or Nutgrass shall be rejected. Physical properties as follows: Clay - between 7-27 percent
- Silt between 15-25 percent Sand - less than 52 percent
- Organic matter shall be 3%-10% of total dry weight. 4. If requested, provide a certified soil analysis conducted by an approved soil testing laboratory verifying that sandy loam meets the above requirements.
- Organic Material: Compost with a mixture of 80% vegetative matter and 20% animal waste. Ingredients should be a mix of course and fine textured material.
- Premixed Bedding Soil as supplied by Vital Earth Resources, Gladewater, Texas; Professional Bedding Soil as supplied by Living Earth Technology, Dallas, Texas or Acid

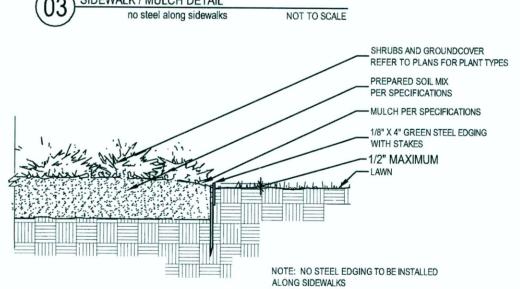
Gro Municipal Mix as supplied by Soil Building Systems, Dallas, Texas or approved equal.

- Sharp Sand: Sharp sand must be free of seeds, soil particles and weeds.
- Mulch: Double Shredded Hardwood Mulch, partially decomposed, dark brown. Living Earth Technologies or approved equal.
- Organic Fertilizer: Fertilaid, Sustane, or Green Sense or equal as recommended for required applications. Fertilizer shall be delivered to the site in original unopened containers, each bearing the manufacturer's guaranteed statement of analysis.
- Commercial Fertilizer: 10-20-10 or similar analysis. Nitrogen source to be a minimum 50% slow release organic Nitrogen (SCU or UF) with a minimum 8% sulphur and 4% iron,
- Peat: Commercial sphagnum peat moss or partially decomposed shredded pine bark or other approved organic material.

2.3 MISCELLANEOUS MATERIALS

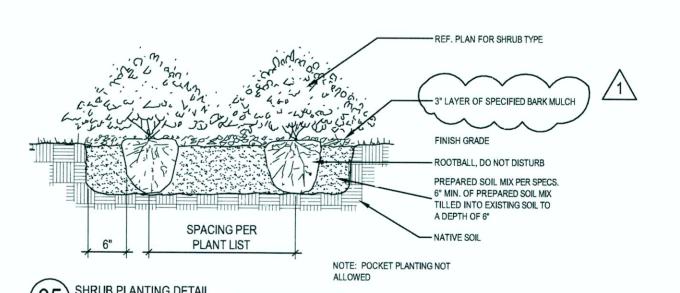
- A. Steel Edging: Shall be Ryerson "Estate Curbing", 1/8" x 4" with stakes 4' on center.
- B. Staking Material for Shade Trees:
- 1. Post: Studded T-Post, #1 Armco with anchor plate; 6'-0" length; paint green. Wire: 12 gauge, single strand, galvanized wire. 3. Rubber hose: 2 ply, fiber reinforced hose, minimum ½ inch inside diameter. Color:
- C. Gravel: Washed native pea gravel, graded 1 in. to 1-1/2 in.
- Filter Fabric: Mirafi 140N by Celanese Fibers Marketing Company, available at Loftland Co., (214) 631-5250 or approved equal.





NOT TO SCALE

04) STEEL EDGING DETAIL





smr landscape architects, inc. 1708 N. Griffin Street Dallas, Texas 75202 Tel 214.871.0083 Fax 214.871.0545 Email smr@smr-la.com

RECORD DRAWING DATE 06-26-17

NOT TO SCALE

OWNER/DEVELOPER SEAMAN DEVELOPMENT CORPORATION 400 PERIMETER CENTER TERRACE, SUITE 800 ATLANTA, GEORGIA 30346 (678) 338-4566 CONTACT: JEFF FINKEL



BDA

BDA

01/15/16

LANDSCAPE SPECIFICATIONS ROOMS TO GO N.E.Q. I.H. 30 & GREENCREST BOULEVARD THE CITY OF ROCKWALL, TEXAS DESIGN DRAWN DATE SCALE NOTES FILE 112-009

NONE

ASC

SITE

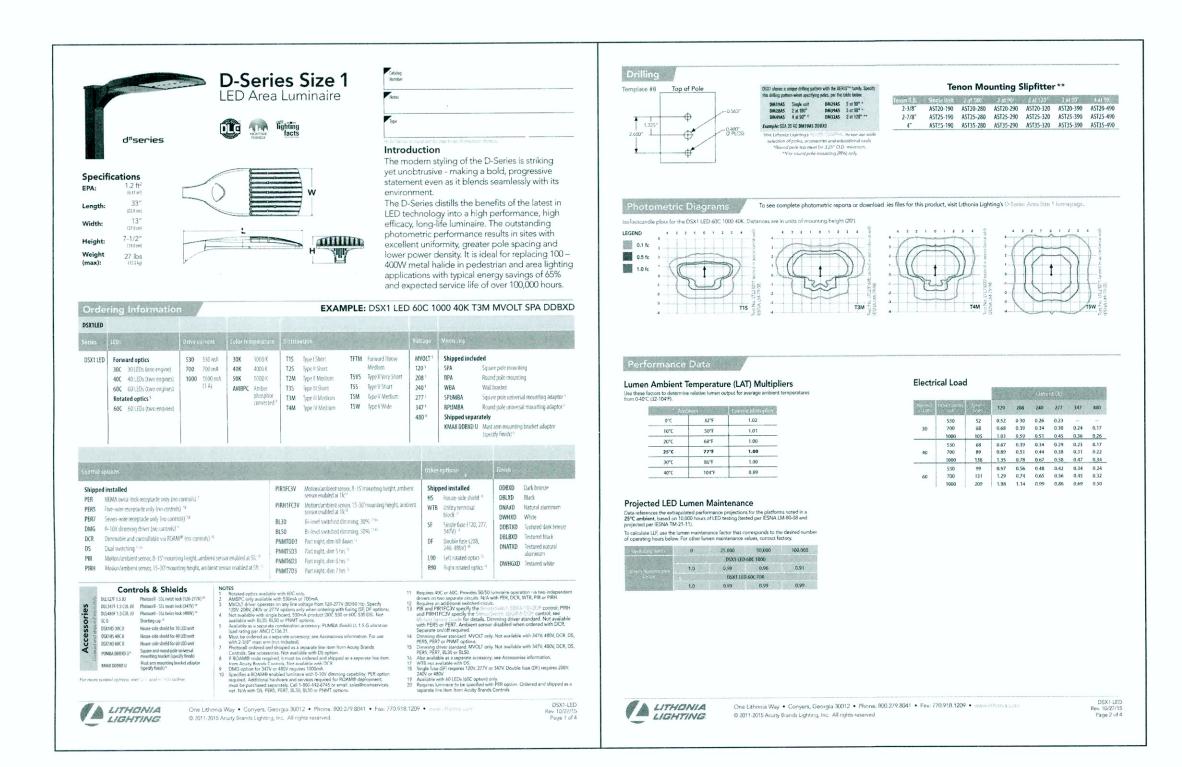
THIS LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.

NOTES

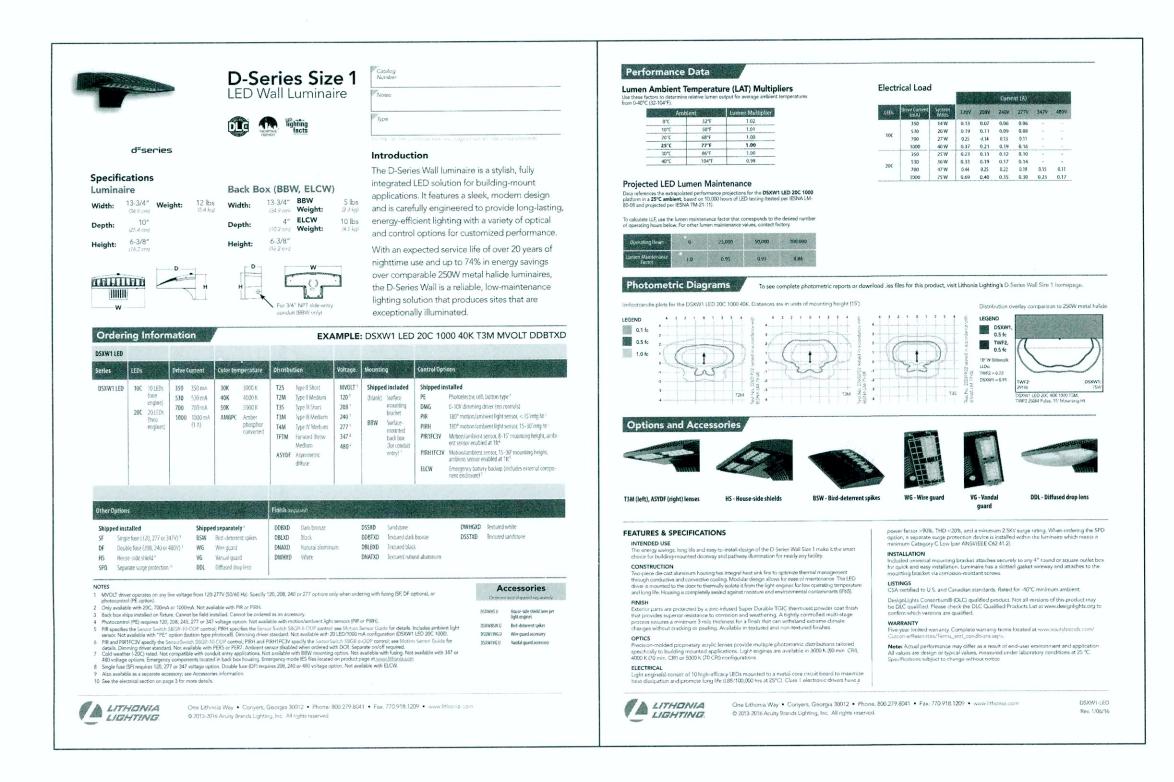
1. SITE PHOTOMETRICS PERFORMED WITHOUT CONTRIBUTION OF EXISTING ADJACENT PARKING LOT LIGHTS.

- 2. REFER TO LUMINAIRE LOCATIONS FOR MOUNTING HEIGHT (MH).
- 3. ILLUMINATION CALCULATIONS PERFORMED ON A MAINTAINED BASIS WITH LLF=0.91 FOR LED
- LUMINAIRES AT FINISHED GRADE.

 4. ALL LUMINAIRES USED FOR SITE LIGHTING SHALL BE FULL CUTOFF.
- 5. ALL LUMINAIRES SHOWN IN SCHEDULE ARE "LITHONIA". EQUAL FULL CUT OFF LUMINAIRES WITH SAME
- TYPE OF DISTRIBUTION, EFFICACY AND LIGHT SOURCE WILL BE CONSIDERED FOR APPROVAL.
- 6. ANY DEVIATION FROM THE LUMINAIRES SHOWN WILL REQUIRE A PHOTOMETRICS PLAN TO ENSURE THE LUMINAIRES MEET EXTERIOR LIGHTING REQUIREMENTS.
- 7. SITE LIGHTING POLES SHALL PRE-CAST CONCRETE POLES AS SHOWN.
- 8. ALL LUIMNAIRES SHALL BE CONTROLLED BY PHOTOCELL ON, ASTRONOMICAL TIME CLOCK OFF,
- EXCEPT SECURITY LIGHTS CONTROLLED PHOTOCELL ON, PHOTOCELL OFF.
- 9. ALL POLE MOUNT LUMINAIRES SHALL BE DARK BRONZE IN COLOR. WALL MOUNT LUMINARIES SHALL BE WHITE IN COLOR.

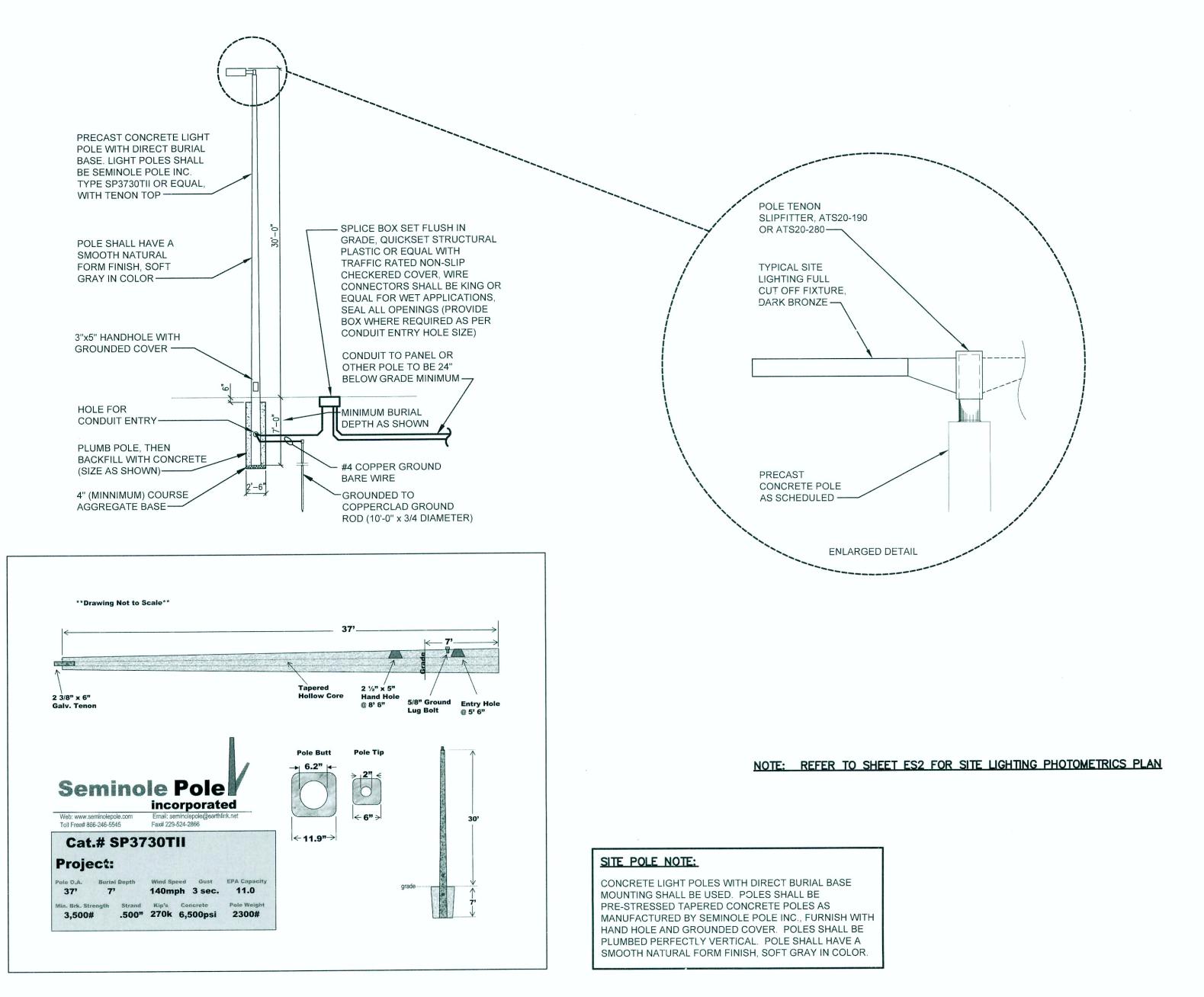


POLE MOUNTED LUMINAIRE - TYPE "OL1", "OL4" AND "OL5"



WALL MOUNTED LUMINAIRE TYPE "FL2" AND FL4"





SITE LIGHTING POLE - PRE-CAST CONCRETE



10877 WATSON ROAD ST. LOUIS, MO 63127 PROJECT MANAGERS

REVISIONS:

NO.# DATE
ISSUED: 02/01/16
OWNER:
PERMIT:
BID:

ROCKWALL, TX

PROFESSIONAL OF RECORD PHONE: 314-821-1100

EXTERIOR LIGHTING DETAILS

DRAWN BY

CHECKED BY

PROJECT NUMBER
915536

SHEET NUMBER

ES

RECORD DRAWING

DATE 00-26-17

BASED ON THE INFORMATION PROVIDED, ALL DIMENSIONS AND LUMINAIRE LOCATIONS SHOWN REPRESENT RECOMMENDED POSITIONS. THE ELECTRICAL CONTRACTOR SHALL

DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING OR FUTURE FIELD CONDITIONS.

THIS LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA

TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY

VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.

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t.0 t.0 t.0 t.0 t.0 t.0 t.0 t.1 t.1 t.3 f.0 2.3 FL2-2

ROCKWALL RENTAL PROPERTIES, 5 P 5.0 5.0 5.0 5.0 5.1 25.3 5/9 1.5

APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO

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1. SITE PHOTOMETRICS PERFORMED WITHOUT CONTRIBUTION OF EXISTING ADJACENT PARKING LOT LIGHTS.

2. REFER TO LUMINAIRE LOCATIONS FOR MOUNTING HEIGHT (MH).

3. ILLUMINATION CALCULATIONS PERFORMED ON A MAINTAINED BASIS WITH LLF=0.91 FOR LED

LUMINAIRES AT FINISHED GRADE.

NOTES

4. ALL LUMINAIRES USED FOR SITE LIGHTING SHALL BE FULL CUTOFF. 5. ALL LUMINAIRES SHOWN IN SCHEDULE ARE "LITHONIA". EQUAL FULL CUT OFF LUMINAIRES WITH SAME

TYPE OF DISTRIBUTION, EFFICACY AND LIGHT SOURCE WILL BE CONSIDERED FOR APPROVAL. 6. ANY DEVIATION FROM THE LUMINAIRES SHOWN WILL REQUIRE A PHOTOMETRICS PLAN TO ENSURE THE LUMINAIRES

MEET EXTERIOR LIGHTING REQUIREMENTS.

7. SITE LIGHTING POLES SHALL PRE-CAST CONCRETE POLES AS SHOWN.

8. ALL LUIMNAIRES SHALL BE CONTROLLED BY PHOTOCELL ON, ASTRONOMICAL TIME CLOCK OFF, EXCEPT SECURITY LIGHTS CONTROLLED PHOTOCELL ON, PHOTOCELL OFF.

9. ALL POLE MOUNT LUMINAIRES SHALL BE DARK BRONZE IN COLOR. WALL MOUNT LUMINARIES SHALL BE WHITE IN COLOR.

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t.0 t.0 t.0 t.0 t.0 t.0 t.1 t.1 t.2 t.4 t.6 t.7 t.8 t.

ROOMS TO GO

40,590 SF

\$ 5.0 \$ 6.0

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
î .	OL1H	2	DSX1 LED 30C 1000 40K TFTM MVOLT HS	DSX1 LED with 30 LEDs @ 1000 mA , 4000K , TYPE FORWARD THROW MEDIUM OPTICS WITH HOUSE-SIDE SHIELD	LED	DSX1_LED_30 C_1000_40K_T FTM_MVOLT_ HS.ie3	9047	0.91	105
٥	OL4H	2	DSX1 LED 60C 700 40K TFTM MVOLT HS	DSX1 LED with 60 LEDs @ 700 mA , 4000K , TYPE FORWARD THROW MEDIUM OPTICS WITH HOUSE-SIDE SHIELD	LED	DSX1_LED_60 C_700_40K_TF TM_MVOLT_H S.ies	12867	0.91	131
	OL5	4	DSX1 LED 60C 700 40K T5S MVOLT	DSX1 LED with 60 LEDs @ 700 mA , 4000K , TYPE 5 SHORT OPTICS	LED	DSX1_LED_60 C_700_40K_T5 S_MVOLT.ies	17021	0.91	131
	FL2	4	DSXW1 LED 20C 700 40K T2S MVOLT	DSXW1 LED WITH (2) 10 LED LIGHT ENGINES, TYPE T2S OPTIC, 4000K, @ 700mA.	LED	DSXW1_LED_ 20C_700_40K_ T2S_MVOLT.ie	4776	0.91	45.7
	FL4	5	DSXW1 LED 20C 1000 40K T4M MVOLT	DSXW1 LED WITH (2) 10 LED LIGHT ENGINES, TYPE T4M OPTIC, 4000K, @ 1000mA.	LED	DSXW1_LED_ 20C_1000_40K _T4M_MVOLT. ies	7420	0.91	73.2

LUMINAIRE LOCATIONS						
No.	Label	МН	Orientation	Tilt		
1	OL5	30.0	180.0	0.0		
2	FL2	18.0	-90.0	0.0		
3	FL2	16.0	-90.0	0.0		
4	FL4	18.0	0.0	0.0		
5	OL5	30.0	180.0	0.0		
6	FL4	18.0	0.0	0.0		
7	OL4H	30.0	0.0	0.0		
8	OL4H	30.0	0.0	0.0		
9	OL1H	30.0	0.0	0.0		
10	OL1H	30.0	0.0	0.0		
11	FL2	18.0	90.0	0.0		
12	FL2	16.0	90.0	0.0		
13	FL4	18.0	0.0	0.0		
14	FL4	18.0	0.0	0.0		
15	FL4	18.0	0.0	0.0		
16	OL5	30.0	180.0	0.0		
17	OL5	30.0	180.0	0.0		

STATISTICS						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Area	+	0.6 fc	3.0 fc	0.0 fc	N/A	N/A
RTG Parking	*	1.4 fc	3.0 fc	0.1 fc	30.0:1	14.0:1

PROFESSIONAL OF RECORD PHONE: 314-821-1100

ST. LOUIS, MO 63127

PROJECT MANAGERS

NO.# DATE

02/25/16

A C

REVISIONS:

PERMIT:

SITE LIGHTING PHOTOMETRIC

DRAWN BY

CHECKED BY

915536

SHEET NUMBER

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FL2-12 30 5.4 5.8 0.5 5.2 51 5.0 5.0 5.0 5.0 5.0

NOTE: REFER TO SHEET ES1 FOR MORE INFORMATION

RECORD DRAWING DATE 00-26-17

