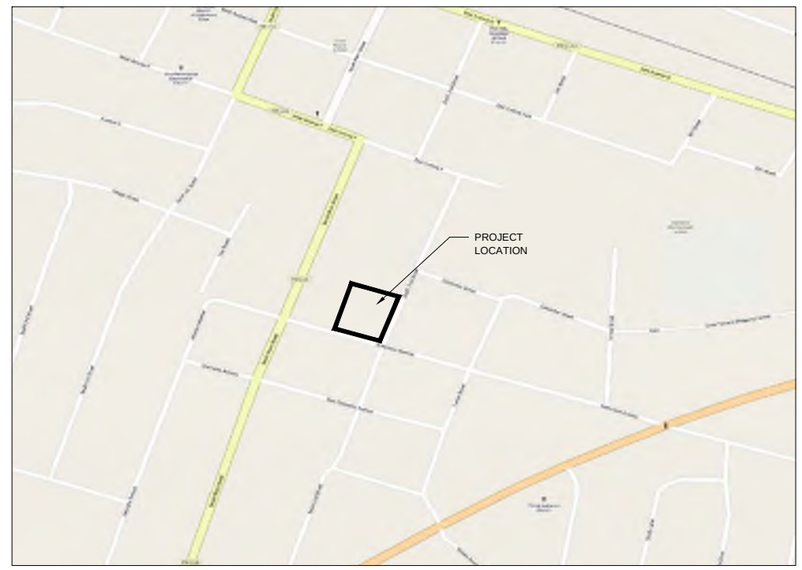
City of Copperas Cove
Copperas Cove IS Building
Copperas Cove, Texas

OWNER
CITY OF COPPERAS COVE
914 S. MAIN ST.
COPPERAS COVE, TEXAS 76522

MAYOR
FRANK SEFFROOD

COUNCIL MEMBERS
CHERYL MEREDITH - PLACE 1
JAMES PIERCE JR. - PLACE 2
DAN YANCEY - PLACE 3
MARTY SMITH - PLACE 4
KIRBY LACK - PLACE 5
GEORGE DUNCAN - PLACE 6
MATTHEW RUSSELL - PLACE 7

CITY MANAGER
ANDREA GARDNER



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Issue for Bid
Issue Date: March 3, 2016

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
PLANNING
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LICENSED
PROFESSIONAL ENGINEER
Lockwood, Andrews & Newnam, Inc.
ID # 2614
3/21/16

Project Team

Project Manager . . . . . Lee B. Hamm, P.E.
Civil Engineers . . . . . Lockwood, Andrews & Newnam, Inc. Waco Office

GENERAL NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH THE PLANS AND REQUIREMENTS OF THE CITY OF COPPERAS COVE TECHNICAL SPECIFICATIONS AND STANDARD DETAILS FOR PUBLIC INFRASTRUCTURE CONSTRUCTION, LATEST EDITION.
2. OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PAY ALL PERMIT AND OTHER ASSOCIATED FEES REQUIRED BY LOCAL, STATE AND FEDERAL AGENCIES.
3. ANY WORK LOCATED ON PUBLIC RIGHT-OF-WAY SHALL CONFORM TO ALL APPLICABLE REQUIREMENTS OF STANDARD SPECIFICATIONS FOR CONSTRUCTION IN COPPERAS COVE.
4. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY BARRICADES, WARNING SIGNS, LIGHTS AND FLAGMEN AS PER THE BEXAR COUNTY PUBLIC WORKS REQUIREMENTS. COST SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. BARRICADES SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).
5. MECHANICAL, ELECTRICAL, AND ARCHITECTURAL ELEMENTS SHOWN ON THE CIVIL PLANS ARE FOR INFORMATION ONLY. REFER TO THE APPROPRIATE DISCIPLINE DRAWINGS FOR DETAILS OF THESE ITEMS.
6. ALL DEBRIS AND REFUSE RESULTING FROM CONSTRUCTION OPERATIONS SHALL BE HAULED OFF-SITE AND DISPOSED OF PROPERLY AT THE CONTRACTOR'S EXPENSE. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.

REMOVAL (OR DEMOLITION) NOTES

1. VERIFY ALL FIELD CONDITIONS INCLUDING LOCATION OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. NOTIFY THE OWNER AND ARCHITECT OF ANY DISCREPANCIES AFFECTING THE SCOPE OF THIS CONTRACT.
2. ALL HORIZONTAL AND VERTICAL INFORMATION IS BASED ON THE TOPOGRAPHIC SURVEY AND BOUNDARY SURVEY PREPARED BY QUINTERO ENGINEERING. SEE SURVEY FOR BENCHMARK INFORMATION.
3. THE CONTRACTOR SHALL CONTACT THE LOCAL UTILITY MARKING AUTHORITY PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL MAINTAIN SEDIMENTATION AND EROSION CONTROL MEASURES FOR THE REMAINDER OF THIS CONTRACT.
5. USE TEMPORARY CONSTRUCTION FENCING TO SECURE BUILDING SITE FOR PROTECTION OF PERSONS AND PROPERTY.
6. MAINTAIN FIRE ACCESS WITHIN 150 FEET OF EXTERIOR AREAS OF ALL BUILDINGS DURING CONSTRUCTION.
7. SAWCUT EXISTING PAVEMENT WHICH ABUTS ALL NEW PAVEMENTS TO PROVIDE A STRAIGHT VERTICAL EDGE.
8. COORDINATE WITH OWNER (OR CONTRACTING OFFICER) FOR ANY MATERIAL OR EQUIPMENT TO BE SALVAGED.
9. PROTECT BY WHATEVER MEANS REQUIRED ALL FENCES, SIGNS, STRUCTURES, DRIVES, SIDEWALKS, STREETS, BUSHES, TREES, ETC. WHICH ARE NOT DESIGNATED FOR REMOVAL, OR OUTSIDE THE LIMITS OF CONSTRUCTION.
10. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE INCURRED DURING CONSTRUCTION. THIS INCLUDES, BUT NOT LIMITED TO, DAMAGE CAUSED BY SUBCONTRACTORS TO THE GENERAL CONTRACTOR. REPAIRS SHALL EQUAL OR EXCEED THE QUALITY OF EXISTING CONDITIONS.
11. ALL EXISTING FEATURES (i.e. FENCES, STONEWALLS, ETC.) LOCATED WITHIN THE PROJECT LIMITS THAT HAVE NOT ALREADY BEEN REMOVED (BY OTHERS) MUST BE REMOVED AND DISPOSED OF PROPERLY, OFF-SITE, BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE.
12. CONTRACTOR SHALL REMOVE AND/OR RELOCATE ALL ITEMS NECESSARY TO ACCOMMODATE THE PROPOSED IMPROVEMENTS WHETHER SPECIFICALLY CALLED OUT BY NOTE OR NOT.
13. THE LOCATIONS OF ALL AERIAL AND UNDERGROUND UTILITY FACILITIES ARE APPROXIMATE OR MAY NOT BE INDICATED IN THESE PLANS. UNDERGROUND FACILITIES, WHETHER INDICATED OR NOT, SHALL BE LOCATED PRIOR TO CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, PAVEMENT AND OTHER IMPROVEMENTS. ANY DAMAGE TO EXISTING UTILITIES AND/OR PAVED STREETS CAUSED BY CONSTRUCTION OPERATIONS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

LAYOUT PLAN NOTES

1. COORDINATES AND DIMENSIONS ARE TO EDGE OF PAVEMENT, BACK OF CURB, OUTSIDE FACE OF BUILDING, EDGE OF WALK, OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.

SITE PLAN NOTES

1. PROVIDE 4-INCH WIDE WHITE SOLID STRIPING IN AUTOMOBILE PARKING AREAS.
2. PROVIDE PAINT SYMBOLS AND SIGNAGE AT ACCESSIBLE PARKING SPACES.
3. REFER TO SHEET, C-103, FOR DIMENSIONS AND LOCATION OF SITE FEATURES.
4. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR ACTUAL BUILDING DIMENSIONS, STOOP AND RAMP LOCATIONS.
5. THE CONTRACTOR SHALL CONSTRUCT ALL PAVEMENTS TO CONFORM WITH THE CORRECT LINES, AND FINISHED GRADES AS INDICATED ON THE PLANS. NO PONDING OF WATER WILL BE ALLOWED.
6. THE CONTRACTOR SHALL CONSTRUCT ALL PAVEMENTS TO MATCH EXISTING PAVEMENT GRADES AT TIE-IN POINTS. CUT CONTRACTION JOINTS AT EXISTING JOINT LOCATIONS.
7. CONTINUE ALL JOINTS THROUGH THE CURB.
8. SAW ALL CONCRETE CONSTRUCTION JOINTS, CLEAN THEM OF DEBRIS, BLOW THEM DRY AND IMMEDIATELY SEAL WITH JOINT SEALANT.
9. MATCH NEW CONTRACTION JOINTS WITH JOINTS IN ADJACENT CONCRETE.
10. ENSURE POSITIVE DRAINAGE AT ALL PAVEMENT REPLACEMENT LOCATIONS.
11. CONTRACTOR SHALL PLACE EXPANSION JOINTS AT THE END OF A DAY'S POUR.

EROSION CONTROL MAINTENANCE SCHEDULE (PROJECT SPECIFIC)

THE FOLLOWING EROSION CONTROL FEATURES MAINTENANCE SCHEDULE HAS BEEN PROVIDED. THE OWNER'S REPRESENTATIVE SHALL PERFORM THE INSPECTIONS. THE CONTRACTOR SHALL ALSO PERFORM ALL NEEDED MAINTENANCE. FURTHERMORE, ALL EROSION CONTROL FEATURES REQUIRING MAINTENANCE MAY NOT BE LISTED BELOW. THE CONTRACTOR AND OWNER'S REPRESENTATIVE MUST PERFORM THEIR RESPECTIVE DUTIES ON ALL EROSION CONTROL FEATURES THAT ARE NOT LISTED BELOW AS WELL.

SILT FENCE: SILT FENCE SHOULD BE INSPECTED WEEKLY AND AFTER MAJOR RAIN EVENTS TO ENSURE THAT THE DEVICE IS FUNCTIONING PROPERLY. REMOVE SEDIMENT FROM BEHIND FENCE WHEN THE DEPTH OF SEDIMENT HAS BUILT UP TO ONE-THIRD THE HEIGHT OF THE FENCE ABOVE GRADE. INSPECT THE BASE OF THE FENCE TO ENSURE THAT NO GAPS HAVE DEVELOPED AND RETRENCH AS NECESSARY. INSPECT FENCE POSTS TO ENSURE THAT THEY ARE PROPERLY SUPPORTING THE FENCE. STRAIGHTEN, RESET AND ADD POSTS IF NECESSARY. IF FILTER FABRIC IS RIPPED, DAMAGED OR DETERIORATED, REPLACE IT IN ACCORDANCE WITH THE ORIGINAL SPECIFICATIONS AND DETAILS.

STABILIZED CONSTRUCTION ENTRANCE: INSPECTIONS SHOULD BE MADE WEEKLY AND AFTER RAINSTORM EVENTS TO ENSURE THAT THE DEVICE IS FUNCTIONING PROPERLY. WHEN SEDIMENT OR MUD HAS CLOGGED THE VOID SPACES BETWEEN THE STONES OR MUD IS BEING TRACKED ONTO THE PUBLIC ROADWAY THE AGGREGATE PAD MUST BE WASHED DOWN OR REPLACED. RUNOFF FROM THE WASH DOWN OPERATION SHALL NOT BE ALLOWED TO DRAIN DIRECTLY OFF SITE WITHOUT FIRST FLOWING THROUGH ANOTHER EROSION CONTROL FEATURE TO CONTROL OFF-SITE SEDIMENTATION. PERIODIC RE-GRADING OR THE ADDITION OF NEW STONE MAY BE REQUIRED TO MAINTAIN THE EFFICIENCY OF THE INSTALLATION.

TEMPORARY DIVERSIONS: INSPECT DIVERSIONS WEEKLY OR IMMEDIATELY AFTER RAINFALL EVENTS. PARTICULAR ATTENTION MUST BE PAID TO AREAS WHERE SEDIMENT BUILDS UP IN THE CHANNEL, AREAS WHERE VEHICLES HAVE CROSSED OR CAUSED DAMAGE, AREAS WHERE THE RIDGE BEGINS TO ERODE, AND ANY AREAS WHERE FLOW OVERTOPS THE RIDGE. SEDIMENT IN THE CHANNEL SHALL BE PROMPTLY REMOVED AND DAMAGED AREAS OF THE RIDGE SHALL BE STABILIZED BY APPROPRIATE METHODS. METHODS OF STABILIZATION MAY INCLUDE THE FOLLOWING OR ANY COMBINATION OF THE FOLLOWING; NETTING, MULCHING, TEMPORARY SEEDING, OR THE FLATTENING OF THE SIDE SLOPES. DIVERSIONS TO BE LEFT IN PLACE FOR MORE THAN 30 DAYS SHOULD BE STABILIZED BY ESTABLISHING TEMPORARY GROUND COVER.

EROSION CONTROL MATTING: INSPECT THE EROSION CONTROL MATTING INSTALLATIONS AFTER ALL RAINFALL EVENTS TO ENSURE THAT THE FACILITIES ARE FUNCTIONING PROPERLY AND HAVE NOT BEEN DISPLACED BY RUNOFF. PARTICULAR ATTENTION MUST BE PAID TO THE UPSTREAM ENDS OF CHANNEL LININGS AND SLOPE PROTECTION, AS WELL AS THE JOINTS BETWEEN ADJACENT MATS. REPAIR ANY DAMAGED AREAS PROMPTLY AND REPLACE ANY DISPLACED MATTING. ADDITIONAL STAKING MAY BE REQUIRED ON STEEPER SLOPES AND IN CHANNEL BOTTOMS.

GRASS LINED CHANNELS: DURING THE VEGETATION ESTABLISHMENT PERIOD, INSPECT CHANNELS AFTER EVERY RAIN EVENT. CHECK FOR EROSION AND SEDIMENT BUILDUP AND REPAIR AS NEEDED. AFTER ESTABLISHMENT OF VEGETATION, PERIODICALLY CHECK CHANNEL FOR DAMAGE. PARTICULAR ATTENTION MUST BE GIVEN TO SIDE SLOPES, EMBANKMENTS AT PIPE INLETS AND OUTLETS, AND CONDITION OF THE VEGETATION STABILIZATION. VEGETATED CHANNELS REQUIRE MAINTENANCE FOR WEED CONTROL, POSSIBLE MOWING, SEDIMENT REMOVAL, AND RILL DEVELOPMENT.

GRADING NOTES

1. THE PROPOSED GRADES SHOWN ON THE GRADING PLAN ARE FINISHED GRADES. SPOT ELEVATIONS ALONG CURB LINES REPRESENT THE FLOWLINE UNLESS OTHERWISE NOTED.
2. GRADING ACTIVITY WHICH BLOCKS TRAFFIC OF ANY STREET, ALLEY, OR DRIVE IS SUBJECT TO APPROVAL.
3. CONTRACTOR SHALL STOP WORK IMMEDIATELY AND NOTIFY THE CONTRACTING OFFICER IF CONTAMINANTS ARE FOUND IN THE EXISTING SOILS.
4. SIDEWALK CROSS-SLOPES SHALL NOT EXCEED 2.0%.
5. IN AREAS WHERE NEW FILL IS TO BE PLACED ON SLOPING GROUND, BENCHING THE SURFACE SHALL BE COMPLETED PRIOR TO PLACING THE FILL. BENCHING SHALL BE COMPLETED WHERE SLOPES ARE STEEPER THAN 4:1 (HORIZONTAL:VERTICAL).
6. ALL GRADES WITHIN THE DETENTION POND AREA SHALL NOT EXCEED 3 HORIZONTAL TO 1 VERTICAL UNLESS OTHERWISE NOTED.
7. SEE SHEET C-101 FOR THE SEDIMENTATION AND EROSION CONTROL PLAN.
8. PROVIDE POSITIVE DRAINAGE AT ALL TIMES WITHIN THE CONSTRUCTION AREA. DO NOT ALLOW WATER TO POND IN EXCAVATION AREAS, AND MAINTAIN ALL EXISTING DRAINAGE PATTERNS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH ALL OSHA REGULATIONS IN THE EXECUTION OF WORK UNDER THIS CONTRACT.
10. THE CONTRACTOR SHALL ADJUST TO GRADE ALL MANHOLE STRUCTURES AND APPURTENANCES THAT FALL WITHIN THE LIMITS OF THIS CONTRACT. THE CONTRACTOR SHALL KEEP ALL SAID EXISTING UTILITIES AND THEIR APPURTENANCES FREE OF DEBRIS AND OPERABLE AT ALL TIMES DURING CONSTRUCTION.
11. ALL PAVEMENT GRADES SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED:
    CONCRETE PAVEMENT - 1% MINIMUM, 4% MAXIMUM
    CONCRETE CURB AND GUTTER - 0.50% MINIMUM

UTILITY NOTES

1. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO EXISTING ON- AND OFF SITE UTILITIES INCURRED DURING CONSTRUCTION. THIS INCLUDES, BUT NOT LIMITED TO, DAMAGE CAUSED BY SUBCONTRACTORS TO THE GENERAL CONTRACTOR. REPAIRS SHALL EQUAL OR EXCEED THE QUALITY OF EXISTING CONDITIONS AND MEET ALL REQUIRED TESTING AND INSPECTIONS. ALL REPAIRS AND INSPECTIONS SHALL BE REPORTED THROUGH THE OWNER OR ARCHITECT.
2. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING WATER AND GAS VALVE BOXES AND MANHOLES THAT FALL WITHIN THE LIMITS OF THIS CONTRACT. THE CONTRACTOR SHALL KEEP ALL SAID WATER, GAS AND EXISTING SEWERS AND THEIR APPURTENANCES FREE OF DEBRIS AND OPERABLE AT ALL TIMES DURING CONSTRUCTION.
3. REFER TO MECHANICAL AND FIRE PROTECTION PLANS FOR CONTINUATION OF UTILITIES INTO THE BUILDING.

EROSION CONTROL NOTES

1. CONTRACTOR SHALL OBTAIN ALL NECESSARY NPDES PERMITS AND SHALL MAINTAIN SAID PERMITS AS REQUIRED BY THE REGULATORY AGENCY.
2. A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE PROVIDED BY THE CONTRACTOR RESPONSIBLE FOR OVERSEEING GRADING AND EROSION CONTROL ACTIVITIES. THE EROSION CONTROL PLAN INCLUDED IN THIS SET, ANY SHEETS REFERENCED ON THAT PLAN, AND ALL DRAINAGE CALCULATIONS (PROVIDED BY ENGINEER OF RECORD) SHALL BE INCLUDED WITH THE POLLUTION PREVENTION PLAN AS REQUIRED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER PERMIT. FAILURE TO IMPLEMENT THE CONTROLS AND PRACTICES OUTLINED WOULD RESULT IN VIOLATION OF THE ENVIRONMENTAL PROTECTION ACT AND CLEAN WATER ACT AND IS GROUNDS FOR PENALTIES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES, NOTIFICATION, MAINTENANCE, MONITORING, AND RECORD KEEPING REQUIRED BY THE NPDES GENERAL PERMIT.
4. CONTRACTOR SHALL MAINTAIN AN INSPECTION AND MAINTENANCE PROGRAM FOR ALL EROSION CONTROL MEASURES. THE INSPECTIONS SHALL BE COMPLETED AT LEAST EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS AFTER A STORM EVENT OF 0.5 INCHES OR MORE. THE MAINTENANCE PROGRAM SHALL REPAIR AND RESTORE ALL EROSION CONTROL MEASURE DEFICIENCIES. DOCUMENTATION OF THE INSPECTIONS, THE FINDINGS, AND CORRECTIVE ACTIONS SHALL BE MAINTAINED AT THE JOB SITE.
5. ESTABLISH EROSION CONTROL MEASURES AT THE BEGINNING OF CONSTRUCTION AND MAINTAIN DURING THE ENTIRE LENGTH OF CONSTRUCTION. AREAS WHICH ARE SUBJECT TO SEVERE EROSION AND OFF-SITE AREAS WHICH ARE ESPECIALLY VULNERABLE TO DAMAGE FROM EROSION AND/OR SEDIMENTATION ARE TO BE IDENTIFIED AND RECEIVE ADDITIONAL EROSION CONTROL MEASURES AS DIRECTED BY THE CONTRACTING OFFICER (OR OWNER'S CONSTRUCTION REPRESENTATIVE).
6. AT THE BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL CRUSHED STONE STABILIZED ENTRANCE AND EXIT DRIVE(S) TO REDUCE THE TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS. THE ENTRANCE/EXIT SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THE MAINTENANCE SHALL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS REQUIRE. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL NOT USE ANY OTHER ACCESS TO THE SITE NOR ALLOW OTHERS TO USE ALTERNATE ACCESS POINTS.
7. LOCATIONS OF STABILIZED CONSTRUCTION ENTRANCES INDICATED ON PLANS ARE APPROXIMATE. CONTRACTOR SHALL ADJUST LOCATION AND SIZE OF ENTRANCES TO ACCOMMODATE CONSTRUCTION VEHICLES AND ACTIVITIES.
8. COORDINATE ALL LAND DISTURBING ACTIVITIES AND CONDUCT SO AS TO MINIMIZE THE SIZE OF THE AREA TO BE EXPOSED AT ANY ONE TIME AND MINIMIZE THE TIME OF EXPOSURE. COORDINATE ALL LAND DISTURBING ACTIVITIES SO AS TO MINIMIZE OFF-SITE SEDIMENTATION DAMAGE. RESTABILIZE DISTURBED AREAS AS SOON AS POSSIBLE AFTER CONSTRUCTION IS COMPLETED.
9. THE CONTRACTOR SHALL NOT DISTURB EXISTING VEGETATION OUTSIDE THE LIMITS OF CONSTRUCTION.
10. PERIODICALLY CLEAN OUT AND DISPOSE OF ALL SEDIMENT ONCE THE STORAGE CAPACITY OF THE DRAINAGE FEATURE OR STRUCTURE RECEIVING THE SEDIMENT IS REDUCED BY ONE-HALF. CLEAN OUT AND DISPOSE OF ALL SEDIMENT AT THE COMPLETION OF THE PROJECT.
11. MAINTAIN TEMPORARY EROSION CONTROL DEVICES UNTIL PERMANENT FACILITIES ARE CONSTRUCTED AND FINAL STABILIZATION HAS OCCURRED.
12. REMOVE THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AND VERIFY THE CLEANING OUT OF ALL STORM DRAINAGE STRUCTURES, INCLUDING FLUMES, PIPES, AND DITCHES ONCE FINAL STABILIZATION HAS OCCURRED.
13. PROVIDE FLEXIBLE GROWTH MEDIUM ON ALL SLOPES 3 HORIZONTAL TO 1 VERTICAL OR STEEPER, AS SHOWN. USE FLEXIBLE GROWTH MEDIUM PER SPECIFICATION _____.
14. CONTRACTOR SHALL PROTECT ALL EXISTING AND PROPOSED DRAINAGE BASINS WITHIN CONSTRUCTION LIMITS AND AS SHOWN.
15. KEEP THE EROSION AND SEDIMENTATION PLAN AND ALL DISCHARGE MONITORING REPORTS ON-SITE FOR THE DURATION OF CONSTRUCTION.
16. FABRIC SILT FENCE SHALL BE CONSTRUCTED ACCORDING TO DETAIL _____.
17. ALL SILT FENCES SHOWN ARE PROVIDED AS A GUIDE TO THE CONTRACTOR AS A MINIMUM LEVEL OF PROTECTION AGAINST EROSION RUNOFF. CONTRACTOR SHALL ADD, ADJUST, AND MAINTAIN SILT FENCE AND/OR SILT DIKES AS NEEDED TO PROTECT FROM EXCESS EROSION AND SEDIMENT RUNOFF FROM THE SITE.
18. THE CONTRACTOR MUST COMPLY WITH ALL NOISE AND DUST CONTROL ORDINANCES OF THE CITY OF COPPERAS COVE.
19. ALL EROSION CONTROL FEATURES SHALL BE KEPT IN WORKING ORDER. THE CONTRACTOR SHALL REPAIR ALL DAMAGES CAUSED BY SOIL EROSION AND CONSTRUCTION EQUIPMENT AT OR BEFORE THE END OF EACH WORKING DAY OR AS DIRECTED BY THE INSPECTOR.
20. EROSION CONTROL FEATURES MAY NOT BE REMOVED UNTIL 90% OF THE AREA HAS BEEN FULLY DEVELOPED. FULL DEVELOPMENT SHALL MEAN INSTALLATION OF PAVEMENTS, BUILDINGS, STORM SEWERS, LANDSCAPING, AND SEEDING.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING CONTAINMENT DIKES OR OTHER PROTECTIVE MEASURES AROUND ALL ON-SITE FUELING AND CHEMICAL STORAGE AREAS.
22. IN THE EVENT OF A RELEASE OF OIL OR HAZARDOUS SUBSTANCE, THE CONTRACTOR SHALL COMPLY WITH THE LOCAL, STATE AND FEDERAL REQUIREMENTS OF ENVIRONMENTAL QUALITY FOR NOTIFICATION, CONTAINMENT, INVESTIGATION, REMEDIAL ACTION AND DISPOSAL.
23. FOR DUST CONTROL THE CONTRACTOR SHALL USE ANY OF THE FOLLOWING MEASURES OR A COMBINATION OF AS NECESSARY:
    A. TANK TRUCK OR OTHER SUCH EQUIPMENT TO SPREAD WATER ON HAUL ROADS.
    B. DECREASE VEHICULAR SPEED ON HAUL ROADS.
    C. AS DIRECTED BY THE OWNER'S REPRESENTATIVE.
28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTAINING ERODED MATERIALS WITHIN THE SITE AND PREVENTING ERODED MATERIALS FROM ENTERING EXISTING AND NEW STORM SEWER SYSTEMS BY INSTALLING FABRIC SILT FENCES, STRAW BALE DIKES, OR OTHER APPURTENANCES AS NECESSARY IN ADDITION TO WHAT IS SHOWN ON THE DRAWINGS.

LEGEND

WV	WATER VALVE
	FIRE HYDRANT
	POWER POLE
W	WATER METER
ICV	IRRIGATION CONTROL VALVE
	SIGN
S	SANITARY SEWER MH
C/O	SANITARY SEWER C.O.
	FLOW ARROW
WW WW	SANITARY SEWER
UT	UNDERGROUND TELEPHONE
UE	UNDERGROUND ELECTRIC
OHE	OVERHEAD ELECTRIC
	PROPERTY LINE
	ADJOINER
	CONCRETE
	PARKING HATCH

City of Copperas Cove
Copperas Cove IS Building

City of Copperas Cove

Copperas Cove, Texas

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KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	PM
Design	M. LEROUX
Draw	K. DEARING
Check	L. HAMM

STAMP

STATE OF TEXAS
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LICENSED
PROFESSIONAL ENGINEER

Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

3/21/16

Project No. 160-10728-000
Date: March 3, 2016

GENERAL NOTES & LEGEND

G-002

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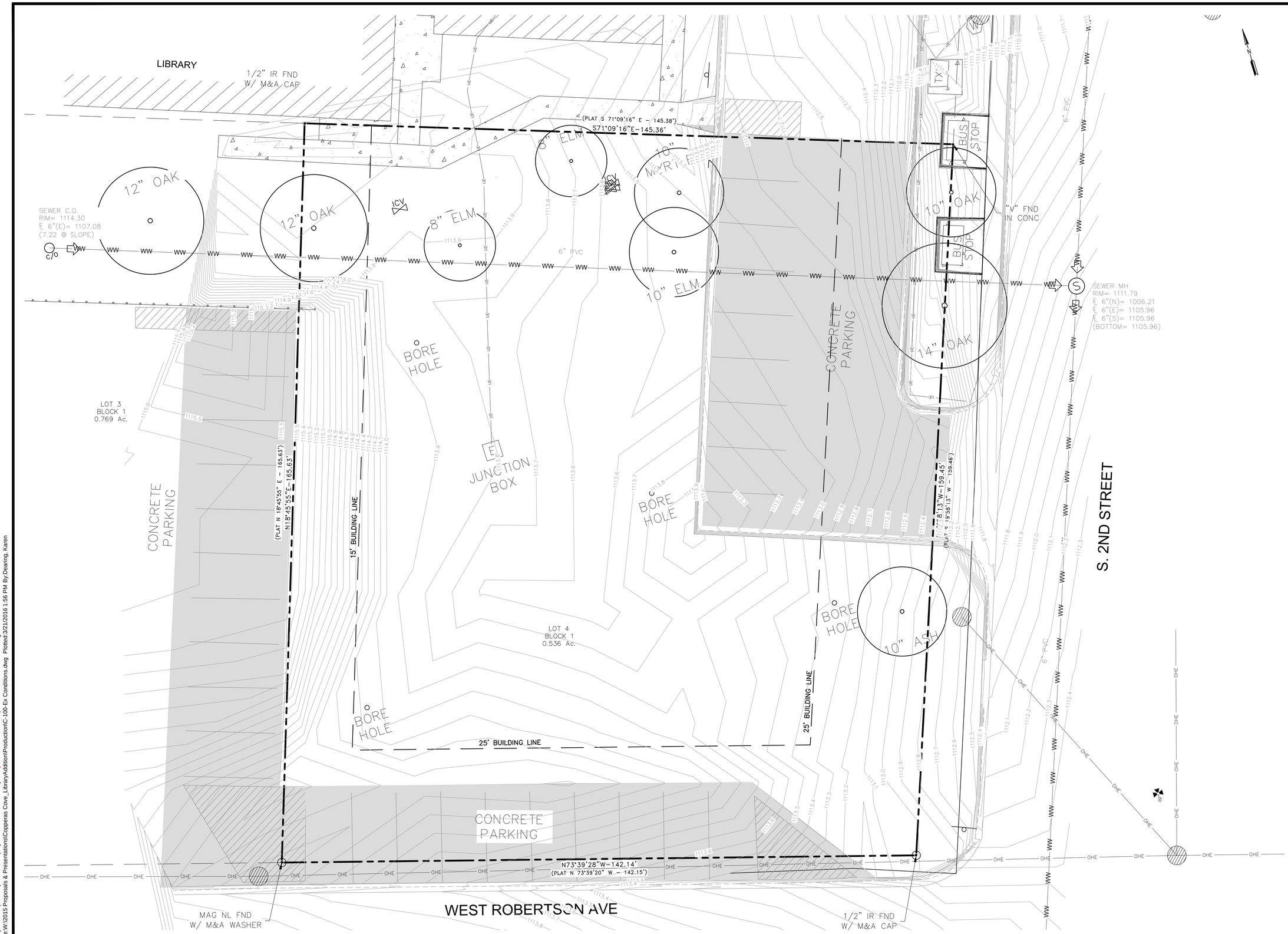

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Manager	PM
Design	M. LEROUX
Draw	M. LEROUX
Check	L. HAMM

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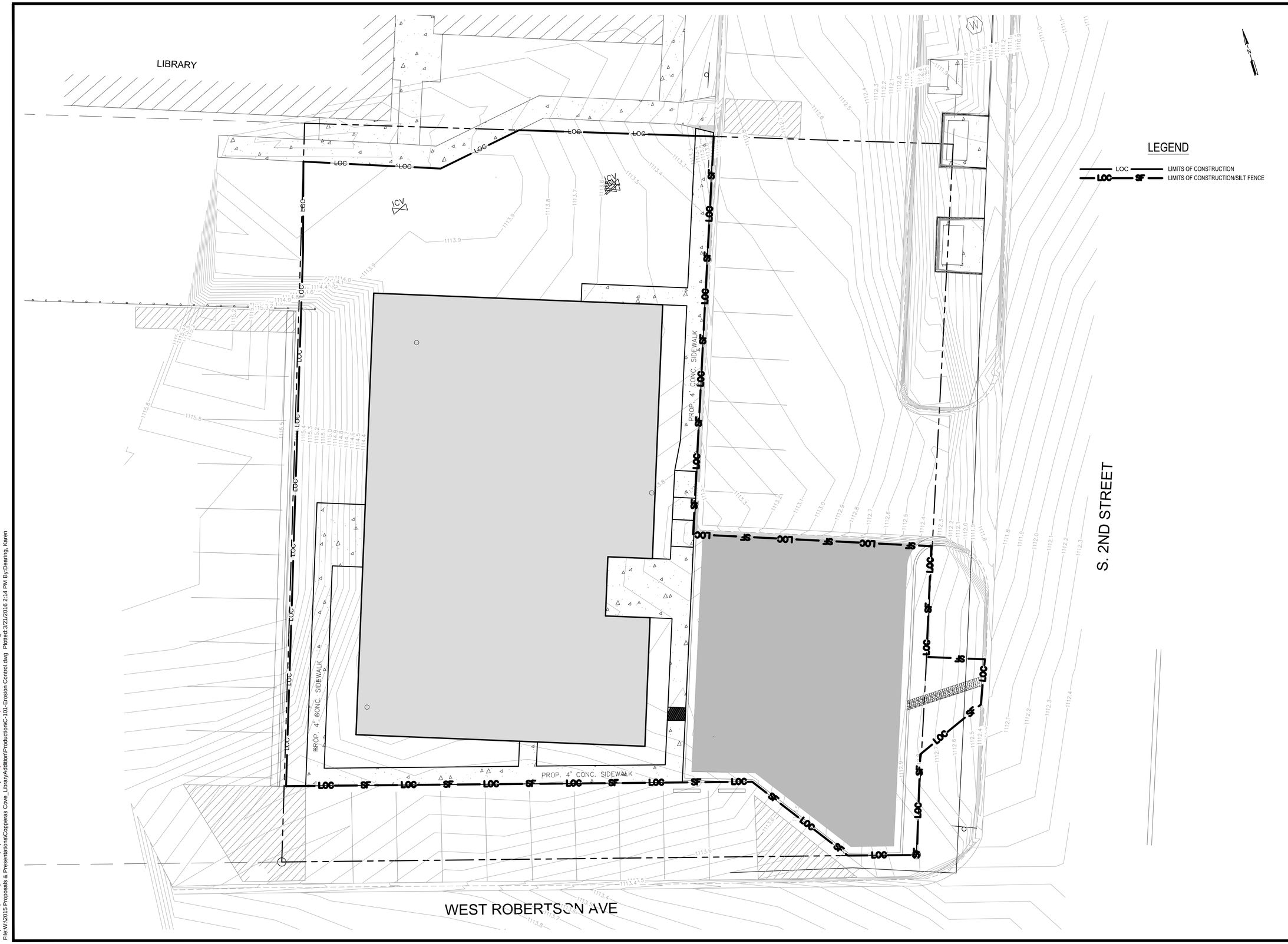

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Design	M. LEROUX
Draw	M. LEROUX
Check	L. HAMM

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SCALE: 1"=10'

Project No. 160-10728-000
Date: March 3, 2016

EROSION AND SEDIMENTATION CONTROL

C-101

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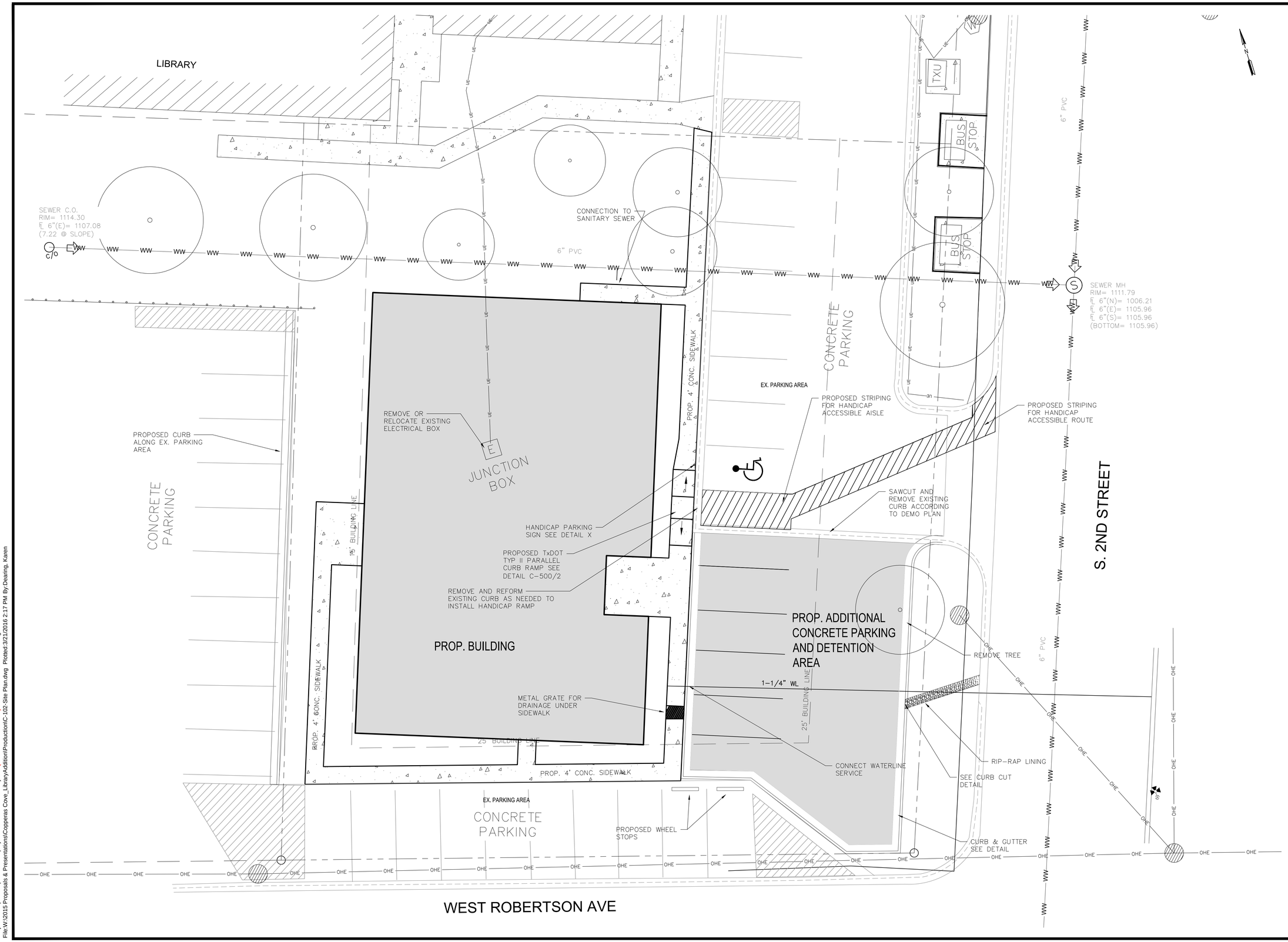

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Manager	PM
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Draw	M. LEROUX
Check	L. HAMM

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0 10 20
SCALE: 1"=10'

Project No. 160-10728-000
Date: March 3, 2016

SI□□ PLAN

C-102

ProjectWise: pw:\\ladpw.lado.int:projectwise\Documents\Projects\ {PROJECT NUMBER}\4-0-Production\4-01-Drawings\
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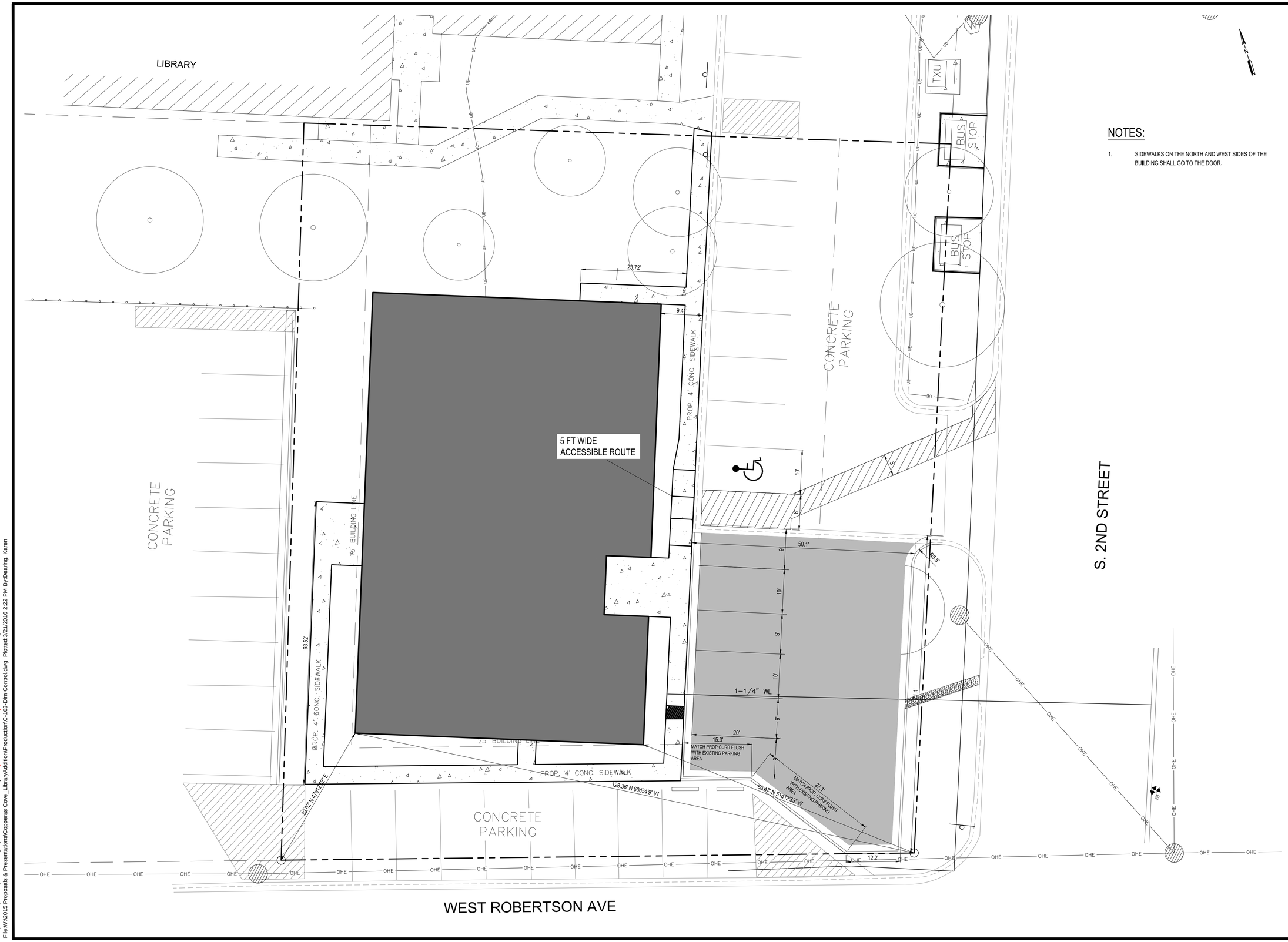

NOTES:

1. SIDEWALKS ON THE NORTH AND WEST SIDES OF THE BUILDING SHALL GO TO THE DOOR.

City of Copperas Cove
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City of Copperas Cove

Copperas Cove, Texas

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY

215 Mary Street
Suite 305
Waco, TX 76701
Tel 254-753-9585
www.lan-inc.com

KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	PM
Design	M. LEROUX
Draw	M. LEROUX
Check	L. HAMM

STAMP

STATE OF TEXAS
LEE B. HAMM
106029
LICENSED
PROFESSIONAL ENGINEER

Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

3/21/16

0 10 20
SCALE: 1"=10'

Project No. 160-10728-000
Date: March 3, 2016

DIMENSION CONTROL PLAN

C-103

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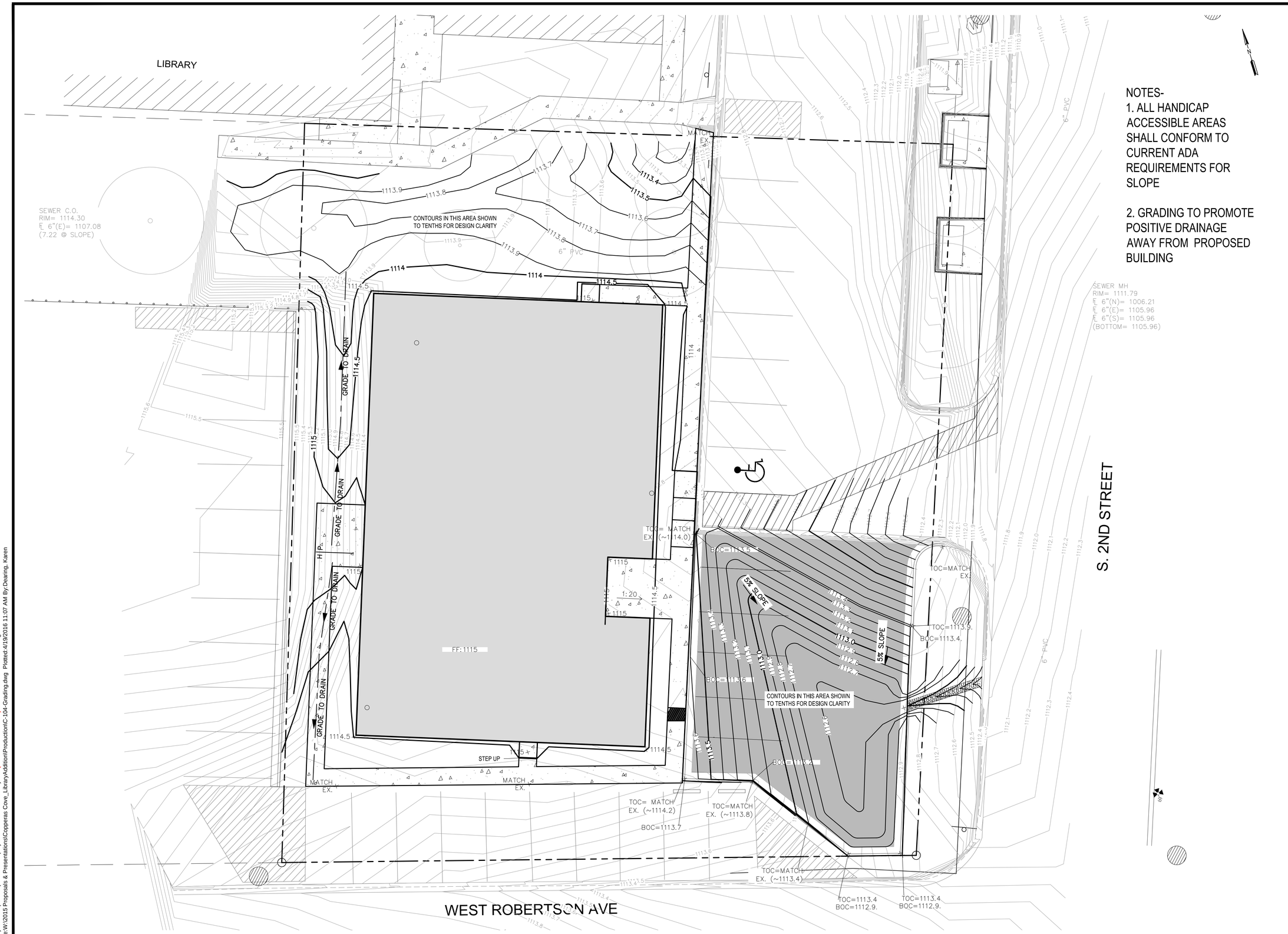

NOTES-

1. ALL HANDICAP ACCESSIBLE AREAS SHALL CONFORM TO CURRENT ADA REQUIREMENTS FOR SLOPE

2. GRADING TO PROMOTE POSITIVE DRAINAGE AWAY FROM PROPOSED BUILDING

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KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	PM
Design	M. LEROUX
Draw	M. LEROUX
Check	L. HAMM

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0 10 20
SCALE: 1"=10'

Project No. 160-10728-000
Date: March 3, 2016

GRADING PLAN

C-104

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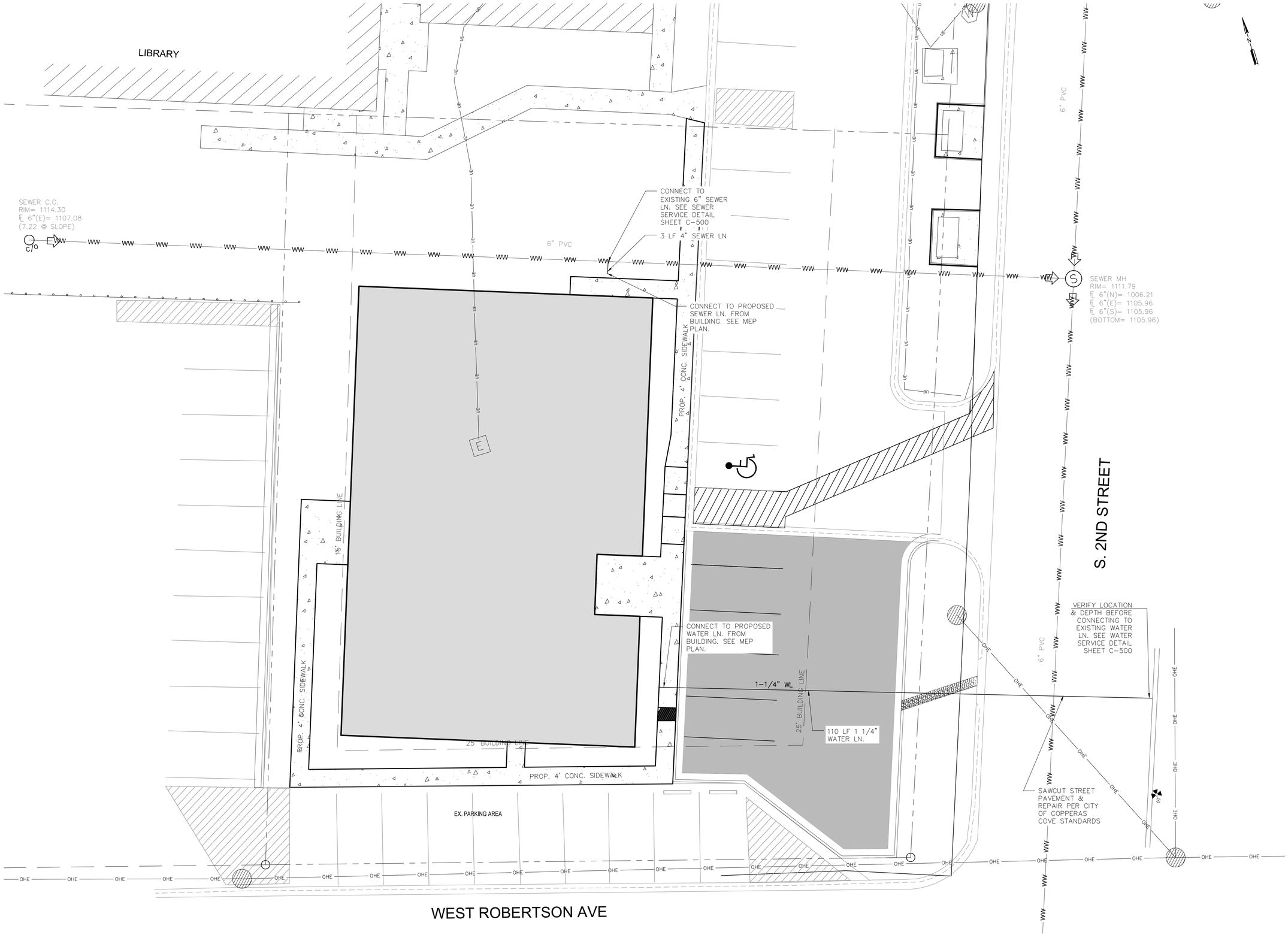

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KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	PM
Design	M. LEROUX
Draw	M. LEROUX
Check	L. HAMM

STAMP

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0 10 20
SCALE: 1"=10'

Project No. 160-10728-000
Date: March 3, 2016

UTILITY PLAN

C-105

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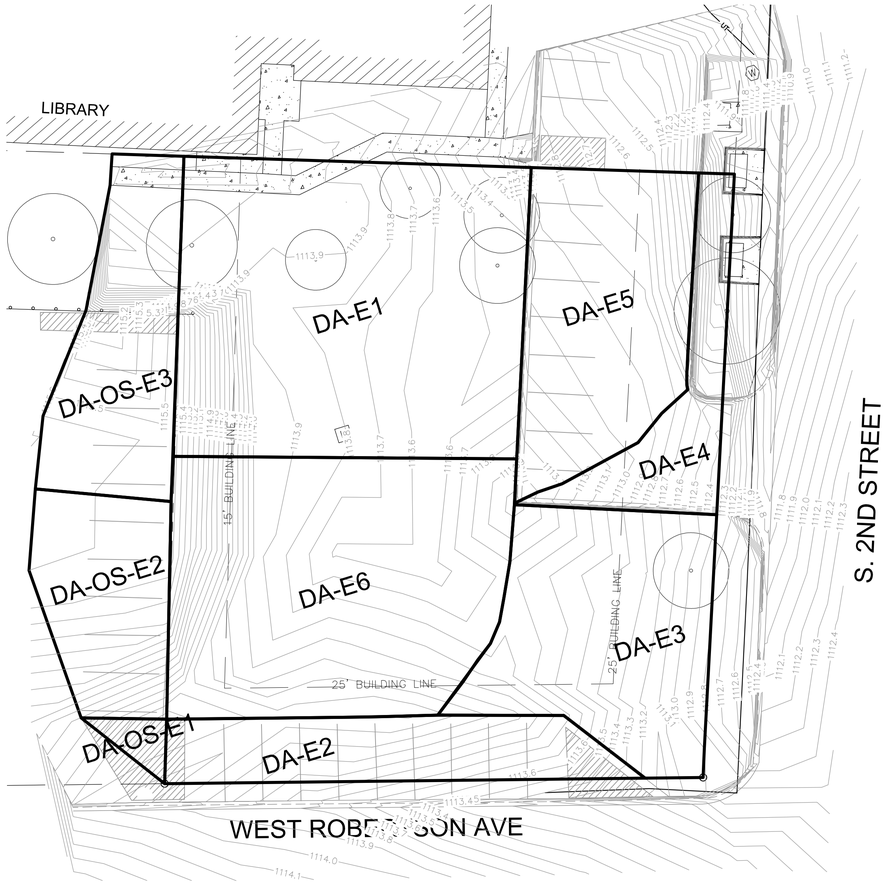

Pre-Development Runoff Calculations

Pre-Development/Existing Composite C Calculations

	Description	Area (sq-ft)	Area (acre)	Surface Description	C25	C100	A*C25	A*C100
DA-E1	Grass Area	6,908.08	0.159	Grass- Good- Flat (0-2%)	0.29	0.36	0.046	0.057
	Sidewalk Near Library	216.00	0.000	Developed-Concrete	0.88	0.97	0.000	0.000
	TOTAL	7,124.08	0.159				0.046	0.057
				Composite C	0.29	0.36		
DA-E2	Grass Area	0.00	0.000	Grass- Good- Flat (0-2%)	0.29	0.36	0.000	0.000
	Parking Lot, Adj to W. Robertson Ave	1,968.30	0.045	Developed-Asphalt	0.86	0.95	0.039	0.043
	TOTAL	1,968.30	0.045				0.039	0.043
				Composite C	0.86	0.95		
DA-E3	Grass Area	3,592.00	0.082	Grass- Good- Flat (0-2%)	0.29	0.36	0.024	0.030
	None	0.00	0.000	Developed-Concrete	0.88	0.97	0.000	0.000
	TOTAL	3,592.00	0.082				0.024	0.030
				Composite C	0.29	0.36		
DA-E4	Grass Area/Island	467.00	0.011	Grass- Good- Flat (0-2%)	0.29	0.36	0.003	0.004
	Parking Lot, Asphalt	990.00	0.023	Developed-Concrete	0.88	0.97	0.020	0.022
	TOTAL	1,457.00	0.033				0.023	0.026
				Composite C	0.69	0.77		
DA-E5	Grass Area	0.00	0.000	Grass- Good- Flat (0-2%)	0.29	0.36	0.000	0.000
	Parking Lot, Asphalt	3,341.00	0.077	Developed-Concrete	0.88	0.97	0.067	0.074
	TOTAL	3,341.00	0.077				0.067	0.074
				Composite C	0.88	0.97		
DA-E6	Grass Area	5,908.84	0.136	Grass- Good- Flat (0-2%)	0.29	0.36	0.039	0.049
	None	0.00	0.000	Developed-Concrete	0.88	0.97	0.000	0.000
	TOTAL	5,908.84	0.136				0.039	0.049
				Composite C	0.29	0.36		
DA-OS-E1	Grass Area	0.00	0.000	Grass- Good- Flat (0-2%)	0.29	0.36	0.000	0.000
	Parking Lot, Asphalt	192.00	0.004	Developed-Concrete	0.88	0.97	0.004	0.004
	TOTAL	192.00	0.004				0.004	0.004
				Composite C	0.88	0.97		
DA-OS-E2	Grass Area	0.00	0.000	Grass- Good- Flat (0-2%)	0.29	0.36	0.000	0.000
	Parking Lot, Asphalt	1,892.00	0.043	Developed-Concrete	0.88	0.97	0.038	0.042
	TOTAL	1,892.00	0.043				0.038	0.042
				Composite C	0.88	0.97		
DA-OS-E3	Grass Area	792.00	0.018	Grass- Good- Flat (0-2%)	0.29	0.36	0.005	0.007
	Parking Lot, Asphalt, Sidewalk	1,642.00	0.038	Developed-Concrete	0.88	0.97	0.033	0.037
	TOTAL	2,434.00	0.056				0.038	0.043
				Composite C	0.69	0.77		

Equation: Composite_C=(∑Ci*Ai)/Atot

Time of Concentration & Intensity Calculations

	DA-ID	L (ft)	Surface Description (to match Manning's n)	Manning's n*	s (ft/ft)	tc (min)	tc selected (min)	i25 ** (in/hr)	i100 ** (in/hr)
Pre-Development/Existing	DA-E1	85	100%- 50-90 percent vegetated ground cover, remaining bare soil or rock outcrops, minimum-medium brush or tree cover (n=0.2)	0.2	0.007	4.82	5	8.9	10.7
Pre-Development/Existing	DA-E2	31	100%- Asphalt (n=0.02)	0.02	0.006	0.18	5	8.9	10.7
Pre-Development/Existing	DA-E3	69	100%- 50-90 percent vegetated ground cover, remaining bare soil or rock outcrops, minimum-medium brush or tree cover (n=0.2)	0.2	0.022	2.23	5	8.9	10.7
Pre-Development/Existing	DA-E4	53	100%- Asphalt (n=0.02)	0.02	0.019	0.18	5	8.9	10.7
Pre-Development/Existing	DA-E5	110	100%- Asphalt (n=0.02)	0.02	0.020	0.37	5	8.9	10.7
Pre-Development/Existing	DA-E6	95	100%- 50-90 percent vegetated ground cover, remaining bare soil or rock outcrops, minimum-medium brush or tree cover (n=0.2)	0.2	0.008	4.93	5	8.9	10.7
Pre-Development/Existing	DA-OS-E1	25	100%- Asphalt (n=0.02)	0.02	0.008	0.13	5	8.9	10.7
Pre-Development/Existing	DA-OS-E2	147	100%- Asphalt (n=0.02)	0.02	0.008	0.77	5	8.9	10.7
Pre-Development/Existing	DA-OS-E3	76	60%- Asphalt (n=0.02) 40%- Grass (n=0.2)	0.094	0.021	1.17	5	8.9	10.7
Post-Development/Proposed	DA-P1	230	100%- Asphalt (n=0.02)	0.02	0.013	0.96	5	8.9	10.7
Post-Development/Proposed	DA-P2	198	70% - Grass (n=0.2) 30%- Asphalt (n=0.02)	0.146	0.016	5.50	6	8.4	10.1
Post-Development/Proposed	DA-P3	130	100%- Asphalt (n=0.02)	0.02	0.009	0.64	5	8.9	10.7
Post-Development/Proposed	DA-P4	72	100%- Asphalt (n=0.02)	0.02	0.007	0.41	5	8.9	10.7
Post-Development/Proposed	DA-OS-P1	25	100%- Asphalt (n=0.02)	0.02	0.008	0.13	5	8.9	10.7
Post-Development/Proposed	DA-OS-P2	147	100%- Asphalt (n=0.02)	0.02	0.008	0.77	5	8.9	10.7
Post-Development/Proposed	DA-OS-P3	76	60%- Asphalt (n=0.02) 40%- Grass (n=0.2)	0.094	0.021	1.17	5	8.9	10.7

* Manning's n value taken from Table 2-3 of the Copperas Cove Drainage Criteria Manual

** Intensity Values taken from the IDF curve provided in the Copperas Cove Drainage Criteria Manual

Eq 1: Sheet Flow Tc= Ln/(42s0.5) (Equation 1 taken from Copperas Cove Drainage Criteria Manual. Valid for L <= 300ft)

Tc= Time of Concentration (min)

L= Length of reach (ft)

n= Manning's n

s= Slope of ground (ft/ft)

Pre-Development/Existing Runoff Calculations

Drainage Area	C25*	C100*	i25 (in/hr)	i100 (in/hr)	A (acre)	Q25 (cfs)	Q100 (cfs)
DA-E1	0.29	0.36	8.9	10.7	0.159	0.409	0.611
DA-E2	0.86	0.95	8.9	10.7	0.045	0.346	0.459
DA-E3	0.29	0.36	8.9	10.7	0.082	0.213	0.318
DA-E4	0.69	0.77	8.9	10.7	0.033	0.206	0.277
DA-E5	0.88	0.97	8.9	10.7	0.077	0.601	0.796
DA-E6	0.29	0.36	8.9	10.7	0.136	0.350	0.523
DA-OS-E1	0.88	0.97	8.9	10.7	0.004	0.035	0.046
DA-OS-E2	0.88	0.97	8.9	10.7	0.043	0.340	0.451
DA-OS-E3	0.69	0.77	8.9	10.7	0.056	0.342	0.461
TOTAL					**0.636**	**2.841**	**3.941**

**C-values are composite values, representing a weighted average for the area.*

Equation: Q=C*i*A

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KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	PM
Design	M. LEROUX
Draw	M. LEROUX
Check	L. HAMM

STAMP

STATE OF TEXAS
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Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

3/21/16

0 10 20
SCALE: 1"=10'

Project No. 160-10728-000
Date: March 3, 2016

EXISTING DRAINAGE CONDITIONS

C-106

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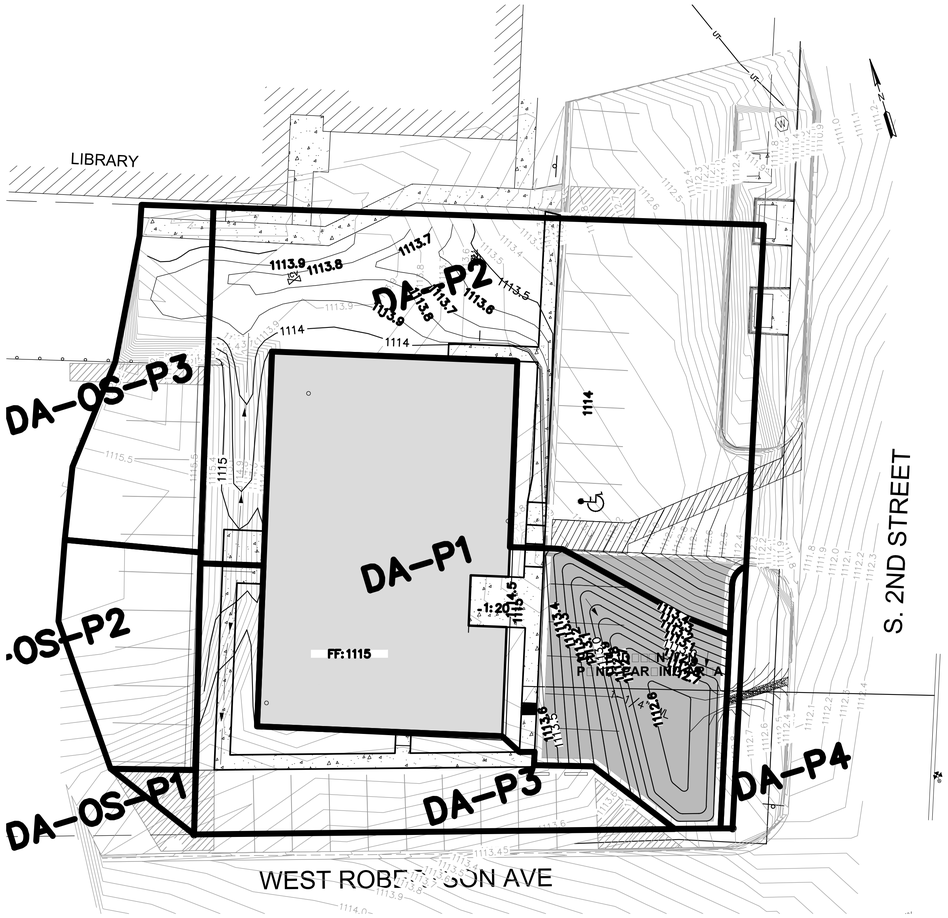

	Cove IDF Curve Intensity	
Tc (min)	I25	I100
5	8.90	10.70
6	8.40	10.10
7	8.00	9.38
8	7.90	9.30
9	7.70	9.00
10	7.50	8.90
11	7.28	8.64
12	7.06	8.38
13	6.84	8.12
14	6.62	7.86
15	6.40	7.60
16	6.28	7.47
17	6.16	7.34
18	6.04	7.21
19	5.92	7.08
20	5.80	6.95
21	5.72	6.86
22	5.64	6.76
23	5.56	6.67
24	5.48	6.57
25	5.40	6.48
26	5.32	6.38
27	5.24	6.29
28	5.16	6.19
29	5.08	6.10
30	5.00	6.00
31	4.93	5.92
32	4.86	5.84
33	4.79	5.76
34	4.72	5.68
35	4.65	5.60
36	4.58	5.52
37	4.51	5.44
38	4.44	5.36
39	4.37	5.28
40	4.30	5.20

25 Year Calcs

Duration (min)	Qin (cfs)	Qout(cfs)	Water Volumein (cf)	Water Volumeout(cf)	Storage Req'd (cf)
5	1.69	0.428	507.5	128.4	379.1
6	1.60	0.428	574.7	154.1	420.7
7	1.52	0.428	638.6	179.8	458.8
8	1.50	0.428	720.7	205.4	515.3
9	1.46	0.428	790.3	231.1	559.2
10	1.43	0.428	855.3	256.8	598.5
11	1.38	0.428	913.2	282.5	630.7
12	1.34	0.428	966.1	308.2	658.0
13	1.30	0.428	1,014.0	333.8	680.2
14	1.26	0.428	1,056.9	359.5	697.4
15	1.22	0.428	1,094.8	385.2	709.6
16	1.19	0.428	1,145.8	410.9	735.0
17	1.17	0.428	1,194.2	436.6	757.6
18	1.15	0.428	1,239.8	462.2	777.6
19	1.13	0.428	1,282.7	487.9	794.8
20	1.10	0.428	1,322.8	513.6	809.2
21	1.09	0.428	1,369.8	539.3	830.5
22	1.07	0.428	1,415.0	565.0	850.0
23	1.06	0.428	1,458.3	590.6	867.7
24	1.04	0.428	1,499.8	616.3	883.5
25	1.03	0.428	1,539.5	642.0	897.5
26	1.01	0.428	1,577.4	667.7	909.7
27	1.00	0.428	1,613.4	693.4	920.0
28	0.98	0.428	1,647.6	719.0	928.6
29	0.97	0.428	1,680.0	744.7	935.3
30	0.95	0.428	1,710.5	770.4	940.1
31	0.94	0.428	1,742.8	796.1	946.7
32	0.92	0.428	1,773.5	821.8	951.7
33	0.91	0.428	1,802.6	847.4	955.1
34	0.90	0.428	1,830.1	873.1	956.9
35	0.88	0.428	1,855.9	898.8	957.1
36	0.87	0.428	1,880.2	924.5	955.8
37	0.86	0.428	1,902.9	950.2	952.8
38	0.84	0.428	1,924.0	975.8	948.2
39	0.83	0.428	1,943.5	1,001.5	942.0
40	0.82	0.428	1,961.4	1,027.2	934.2

100 Year Calcs

Duration (min)	Qin (cfs)	Qout(cfs)	Volumein (cf)	Volumeout(cf)	Storage Req'd (cf)
5	2.24	0.678	673.47	203.40	470.07
6	2.12	0.678	762.85	244.08	518.77
7	1.97	0.678	826.55	284.76	541.79
8	1.95	0.678	936.57	325.44	611.13
9	1.89	0.678	1,019.65	366.12	653.53
10	1.87	0.678	1,120.36	406.80	713.56
11	1.81	0.678	1,196.39	447.48	748.91
12	1.76	0.678	1,265.88	488.16	777.72
13	1.70	0.678	1,328.82	528.84	799.98
14	1.65	0.678	1,385.22	569.52	815.70
15	1.59	0.678	1,435.07	610.20	824.87
16	1.57	0.678	1,504.55	650.88	853.67
17	1.54	0.678	1,570.77	691.56	879.21
18	1.51	0.678	1,633.71	732.24	901.47
19	1.49	0.678	1,693.38	772.92	920.46
20	1.46	0.678	1,749.77	813.60	936.17
21	1.44	0.678	1,812.15	854.28	957.87
22	1.42	0.678	1,872.13	894.96	977.17
23	1.40	0.678	1,929.72	935.64	994.08
24	1.38	0.678	1,984.92	976.32	1,008.60
25	1.36	0.678	2,037.73	1,017.00	1,020.73
26	1.34	0.678	2,088.15	1,057.68	1,030.47
27	1.32	0.678	2,136.17	1,098.36	1,037.81
28	1.30	0.678	2,181.80	1,139.04	1,042.76
29	1.28	0.678	2,225.05	1,179.72	1,045.33
30	1.26	0.678	2,265.89	1,220.40	1,045.49
31	1.24	0.678	2,310.21	1,261.08	1,049.13
32	1.23	0.678	2,352.50	1,301.76	1,050.74
33	1.21	0.678	2,392.78	1,342.44	1,050.34
34	1.19	0.678	2,431.05	1,383.12	1,047.93
35	1.17	0.678	2,467.31	1,423.80	1,043.51
36	1.16	0.678	2,501.55	1,464.48	1,037.07
37	1.14	0.678	2,533.77	1,505.16	1,028.61
38	1.12	0.678	2,563.99	1,545.84	1,018.15
39	1.11	0.678	2,592.18	1,586.52	1,005.66
40	1.09	0.678	2,618.37	1,627.20	991.17

	STAGE STORAGE TABLE					
	ELEV	AREA (sq. ft.)	INC. DEPTH (ft)	MAX DEPTH (ft)	AVG END INC. VOL. (cu. ft.)	AVG END TOTAL VOL. (cu. ft.)
	1112.60	198.45	N/A	0	N/A	0
	1112.70	673.12	0.1	0.10	43.58	43.58
	1112.80	927.06	0.1	0.20	80.01	123.59
	1112.90	1,217.59	0.1	0.30	107.23	230.82
	1113.00	1,389.76	0.1	0.40	130.37	361.19
	1113.10	1,640.36	0.1	0.50	151.51	512.69
	1113.20	1,867.30	0.1	0.60	175.38	688.08
	1113.30	2,104.63	0.1	0.70	198.6	886.67
25 year	1113.33	2,180.88	0.03	0.73	70.47	957.14
100 year	1113.37	2,282.14	0.04	0.77	93.60	1050.74
	1113.40	2,345.36	0.03	0.80	222.5	1109.17

Detention Pond Outlet	
Saw Tooth Curb Cut "Weir" + Overflow Rectangular Weir	
Curb Cut Weir Invert Elev (ft)	1112.60
Curb Cut Weir Length (ft)	0.23
Curb Cut Weir Head (ft), 25 yr	0.73
Curb Cut Weir Head (ft), 100 yr	0.77
Overflow Weir Elevation (ft)	1113.33
Overflow Weir Length (ft)	6.97
Overflow Weir Head (ft), 100 yr	0.04
Overflow Weir, Q-100 (cfs)	0.21
Curb Cut Weir, Q-25 (cfs)	0.43
Overflow Weir, Q-25 (cfs)	0.00
Total Pond Outlet, Q-25 (cfs)	**0.43**
Curb Cut Weir, Q-100 (cfs)	0.46
Overflow Weir, Q-100 (cfs)	0.21
Total Pond Outlet, Q-100 (cfs)	**0.68**
Rectangular Weir Eqn: Q=3.1*(L^1.02)*(H^1.47)	

Flow Summary Comparison Table		
	Q25 (cfs)	**Q100 (cfs)**
Pre-Development/Existing	2.84	3.94
Post-Development/Proposed (without detention)	4.10	5.51
Difference (Proposed-Existing)	1.26	1.57
Pre-Development	2.84	3.94
Post-Development (with detention)	2.84	3.94
Difference (Proposed-Existing)	**0.00**	**0.00**

City of Copperas Cove
Copperas Cove IS Building

City of Copperas Cove

Copperas Cove, Texas

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
215 Mary Street
Suite 305
Waco, TX 76701
Tel 254-753-9585
www.lan-inc.com

KEY PLAN

REVISIONS

NO.	DESCRIPTION	DATE

FILE LOG

ACTIVITY	BY
Manager	PM
Design	M. LEROUX
Draw	M. LEROUX
Check	L. HAMM

STAMP

STATE OF TEXAS
LEE B. HAMM
106029
LICENSED
PROFESSIONAL ENGINEER

Lockwood, Andrews & Newnam, Inc.
Texas Registered Engineering Firm F-2614

3/21/16

0 20 40
SCALE: 1"=20'

Project No. 160-10728-000
Date: March 3, 2016

PR□P□S□D D□□□N□□N & DRAINAG□ S□MMAR□

C-107

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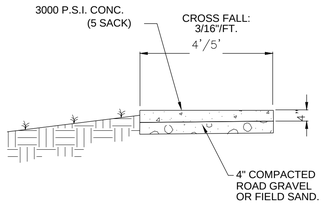

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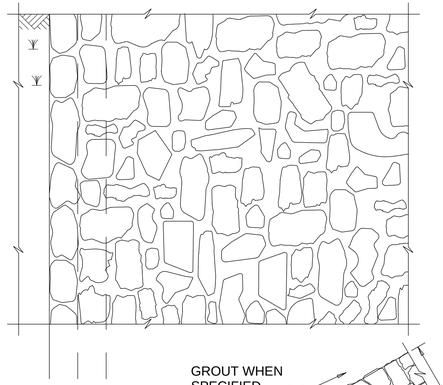
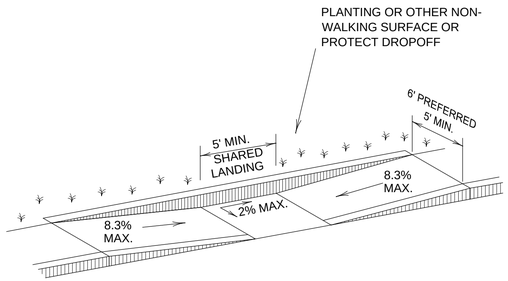
SCALE 1"=20'





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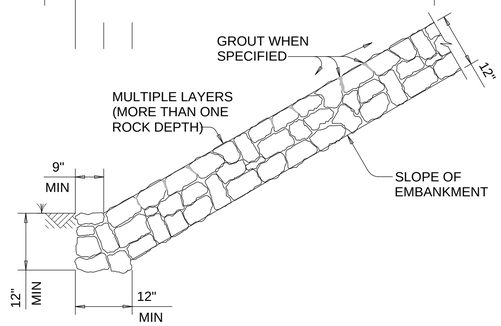
SCALE NTS



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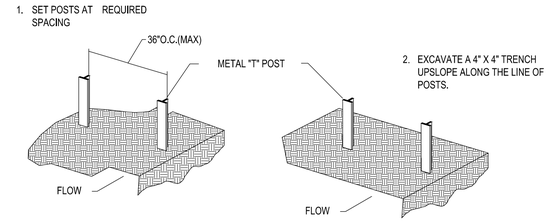
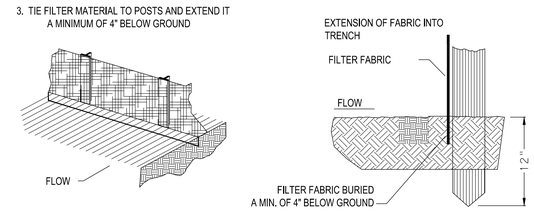


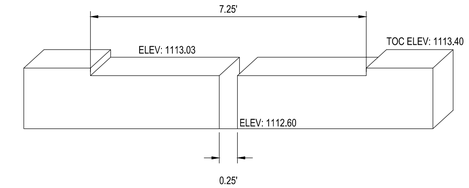


GENERAL NOTES:

1. POSTS TO BE SET AT 3-FOOT MAXIMUM SPACING. IF FACTORY PREASSEMBLED FENCE WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 6 FEET MAXIMUM.
2. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
3. FABRIC MUST HAVE WIRE MESH BACKING.
4. FABRIC MUST BE BURIED A MINIMUM OF 4" INTO GROUND.

SIL□ □□NC□

SCALE NTS



C□RB C□□

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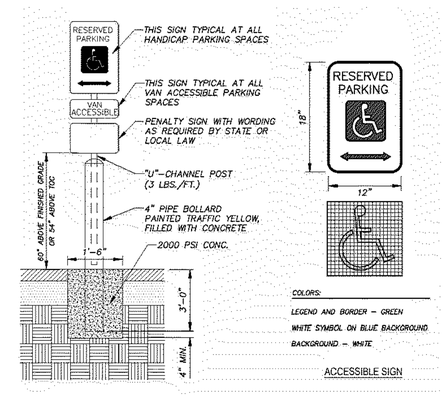
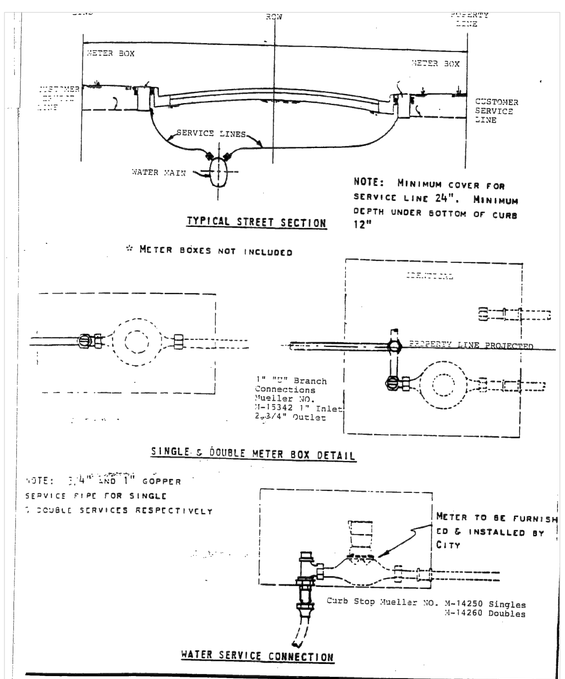


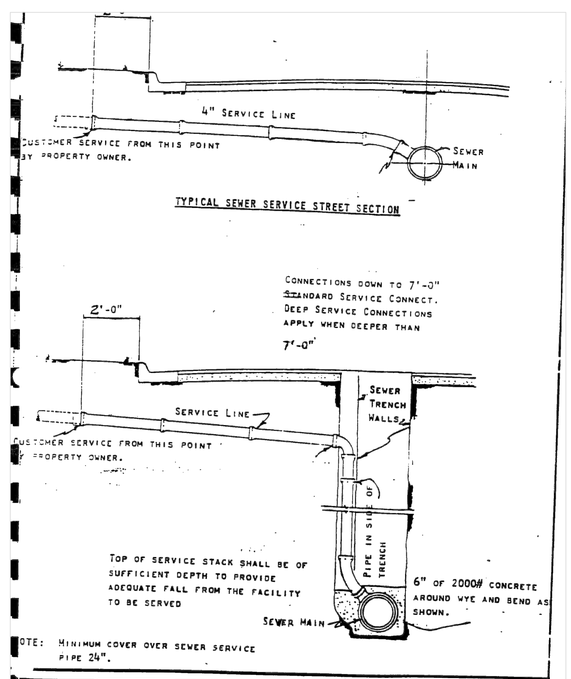
ACCESSIBLE SIGN ASSEMBLY

ACC□SSIBL□ SIGN

SCALE NTS



CITY OF COPPERAS COVE
STANDARD DETAIL
WATER SERVICE DETAIL
Rev 2-90



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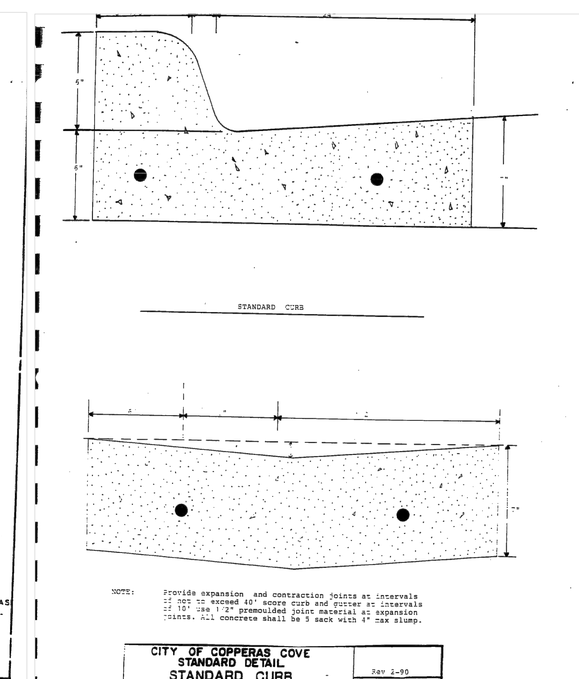
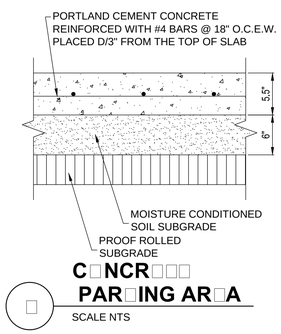
STANDARD DETAIL
SEWER SERVICE DETAIL
Rev 2-90



CITY OF COPPERAS COVE
STANDARD DETAIL
STANDARD CURB
AND GUTTER SECTION
Rev 2-90
NO. 12



C□NCR□□□
PAR□ING AR□A

SCALE NTS

City of Copperas Cove
Copperas Cove IS Building

City of Copperas Cove

Copperas Cove, Texas

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Check	L. HAMM

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Project No. 160-10728-000
Date: March 3, 2016

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