PARKING IMPROVEMENTS
PHASE I

NORTHPORT, ALABAMA

NOT TO SCALE

IMPROVEMENTS FOR THE
NORTHPORT HOUSING AUTHORITY

NOVEMBER 2021

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REVISIONS

NO.	DATE	REMARKS

ALABAMA LICENSED PROFESSIONAL ENGINEER NO. 24483 11/12/21 RUSSELL D. WARE, JR.

YELLOWHAMMER ENGINEERING
PO Box 20603
Tuscaloosa, AL. 35402
Phone 205.764.7593
www.yellowhammereng.com

Parking Improvements
Phase I

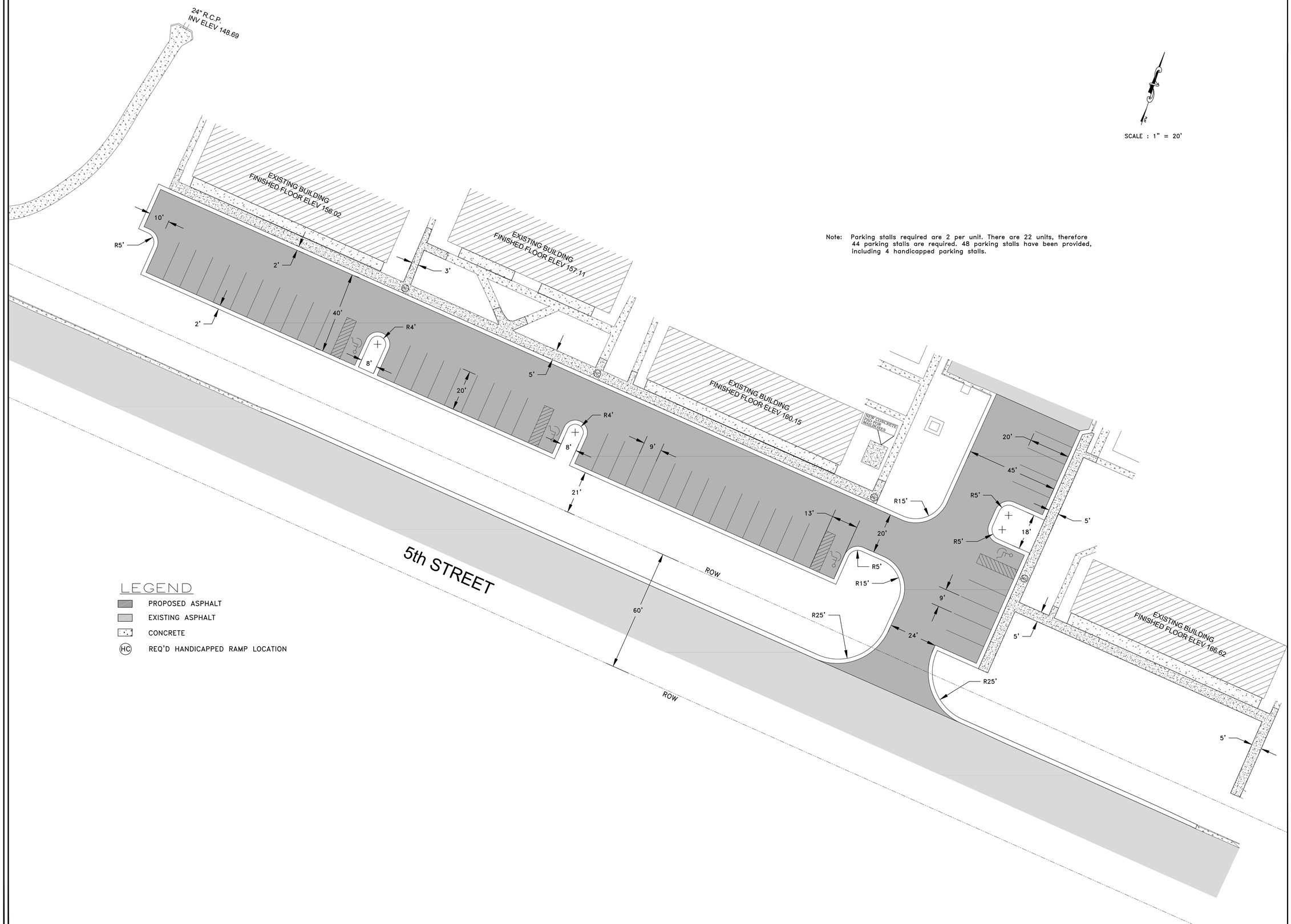
OWNER/DEVELOPER:
Northport Housing Authority
3500 West Circle, Suite 39
Northport, AL. 35476

NORTHPORT, ALABAMA
NOVEMBER 2021

Sheet Title:
COVER SHEET

Date: 11/12/2021

Sheet No.:
1 of 7



Note: Parking stalls required are 2 per unit. There are 22 units, therefore 44 parking stalls are required. 48 parking stalls have been provided, including 4 handicapped parking stalls.

LEGEND

- PROPOSED ASPHALT
- EXISTING ASPHALT
- CONCRETE
- (HC) REQ'D HANDICAPPED RAMP LOCATION

NO.	DATE	REVISIONS REMARKS

ALABAMA LICENSED No. 24883 PROFESSIONAL ENGINEER RUSSELL D. WARE, JR. 11/12/21

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NORTHPORT, ALABAMA
NOVEMBER 2021

Sheet Title:

SITE PLAN

Date: 11/12/2021

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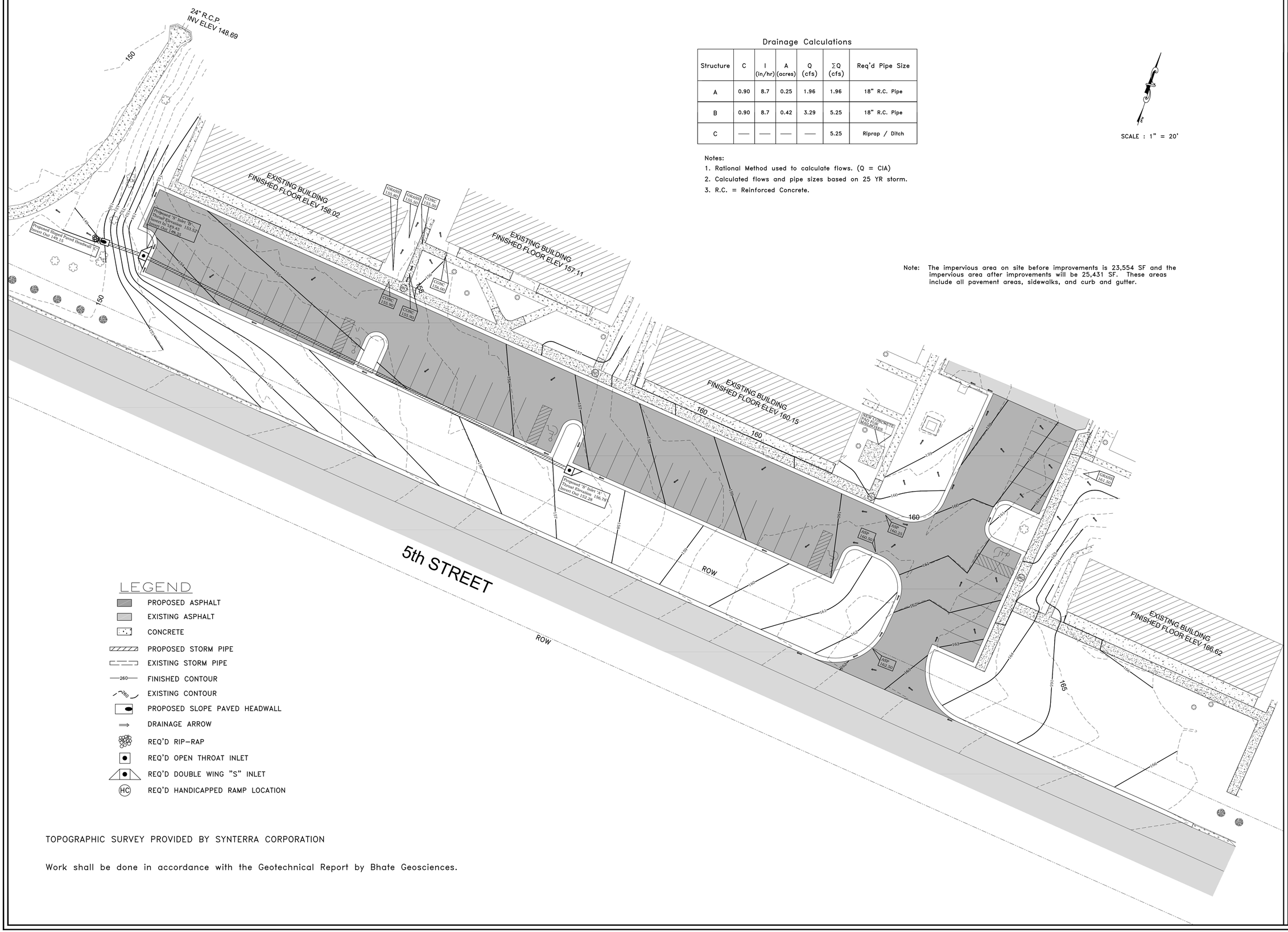

Drainage Calculations

Structure	C	I (in/hr)	A (acres)	Q (cfs)	ΣQ (cfs)	Req'd Pipe Size
A	0.90	8.7	0.25	1.96	1.96	18" R.C. Pipe
B	0.90	8.7	0.42	3.29	5.25	18" R.C. Pipe
C	—	—	—	—	5.25	Riprap / Ditch

Notes:
1. Rational Method used to calculate flows. (Q = CIA)
2. Calculated flows and pipe sizes based on 25 YR storm.
3. R.C. = Reinforced Concrete.

SCALE : 1" = 20'

Note: The impervious area on site before improvements is 23,554 SF and the impervious area after improvements will be 25,431 SF. These areas include all pavement areas, sidewalks, and curb and gutter.

LEGEND

- PROPOSED ASPHALT
- EXISTING ASPHALT
- CONCRETE
- PROPOSED STORM PIPE
- EXISTING STORM PIPE
- 260 FINISHED CONTOUR
- 260 EXISTING CONTOUR
- PROPOSED SLOPE PAVED HEADWALL
- DRAINAGE ARROW
- REQ'D RIP-RAP
- REQ'D OPEN THROAT INLET
- REQ'D DOUBLE WING "S" INLET
- HC REQ'D HANDICAPPED RAMP LOCATION

TOPOGRAPHIC SURVEY PROVIDED BY SYNTERRA CORPORATION

Work shall be done in accordance with the Geotechnical Report by Bhate Geosciences.

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NORTHPORT, ALABAMA
NOVEMBER 2021

Sheet Title:
CONTOUR AND STORM DRAINAGE LAYOUT
Date: 11/12/2021

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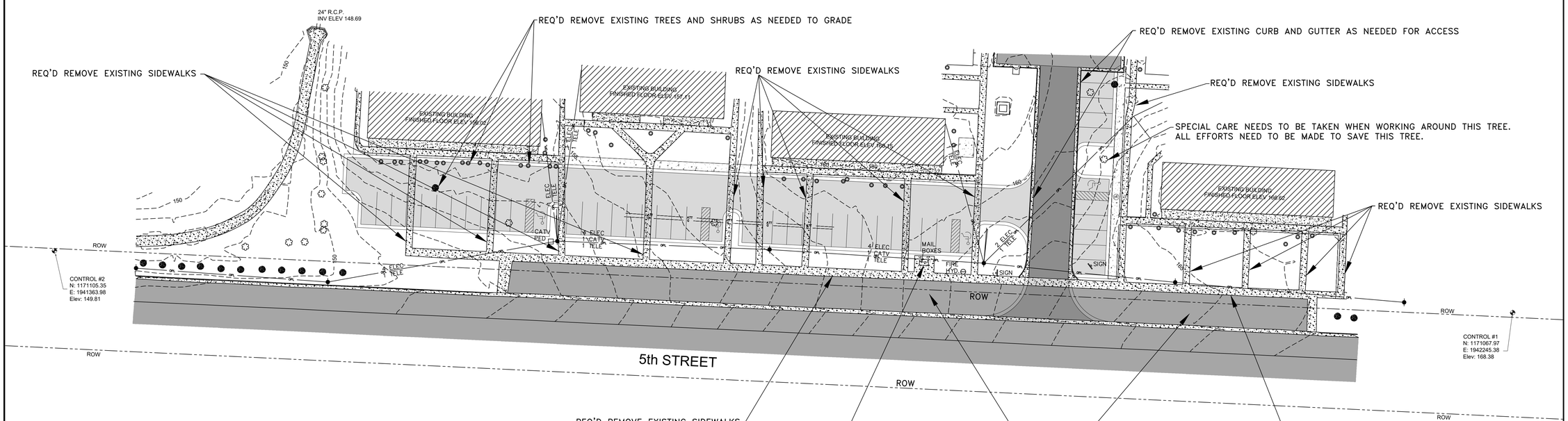
SCALE : 1" = 30'



LEGEND

- EXISTING ASPHALT
- PROPOSED ASPHALT
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- PROPOSED STORM PIPE
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REVISIONS

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No. 24489
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NORTHPORT, ALABAMA
NOVEMBER 2021

Sheet Title:
DEMOLITION PLAN

Date: 11/12/2021

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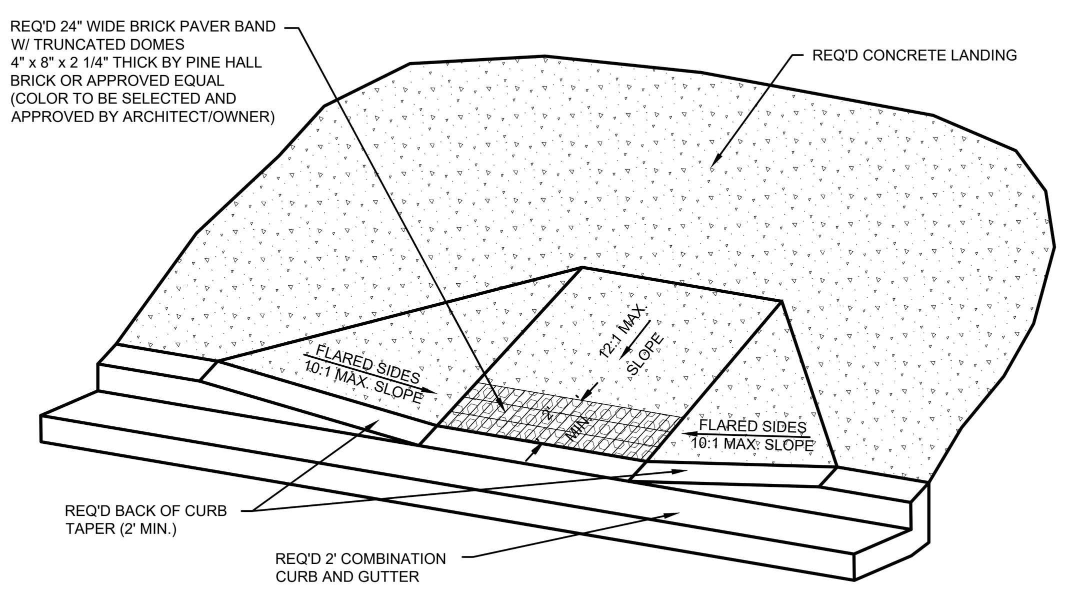
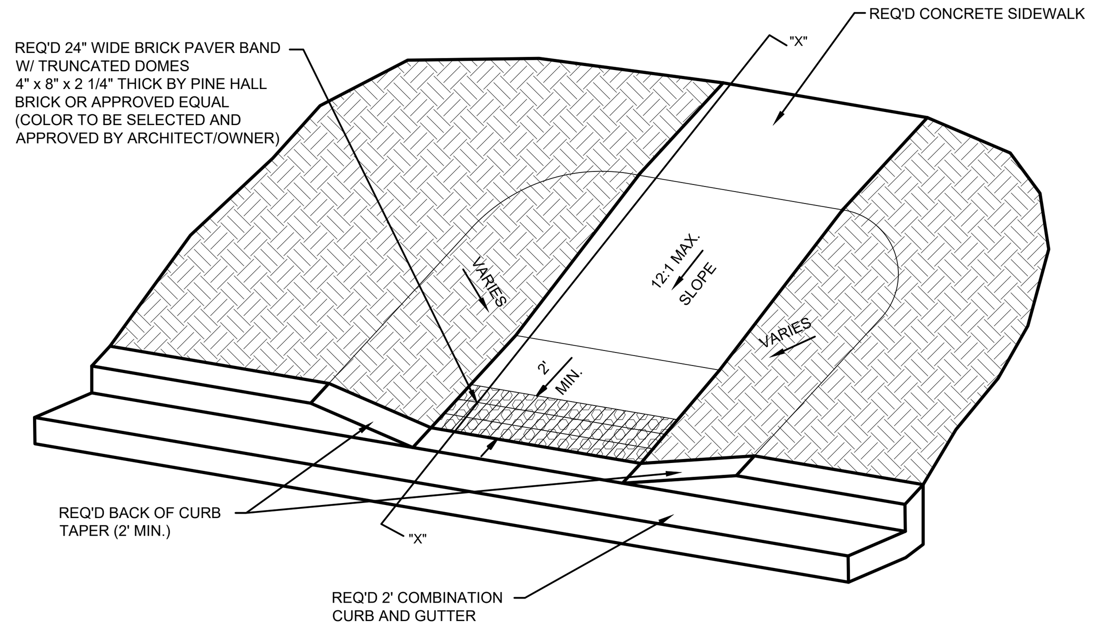
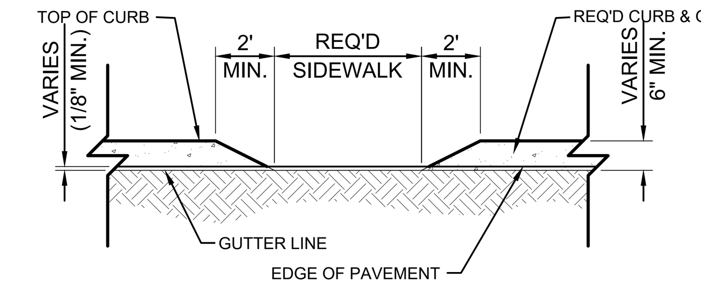
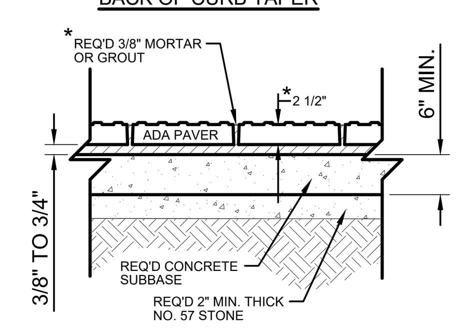


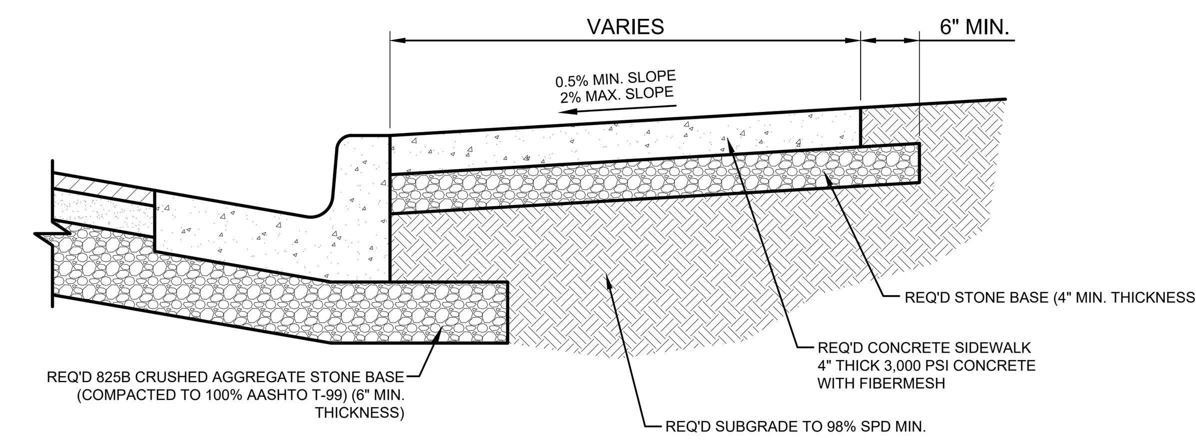




BACK OF CURB TAPER



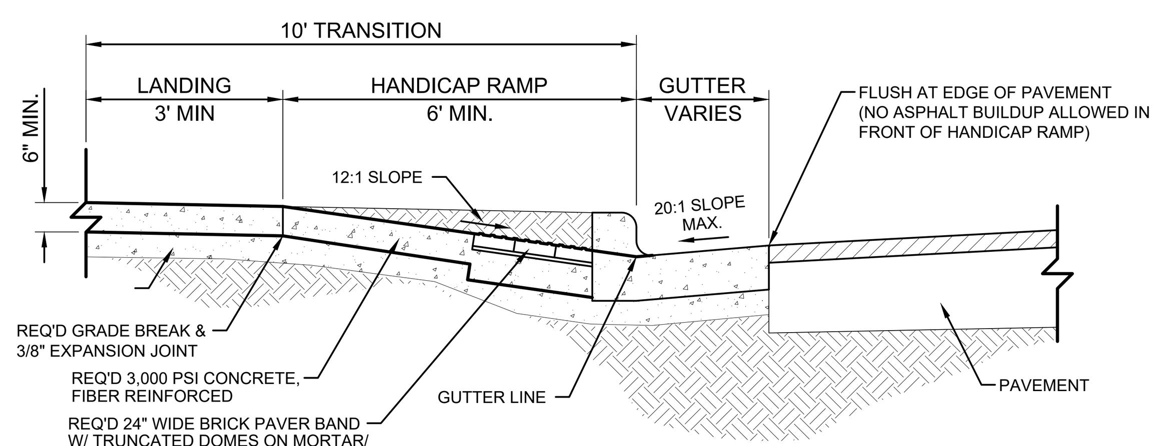
PAVER INSTALLATION TYPICAL



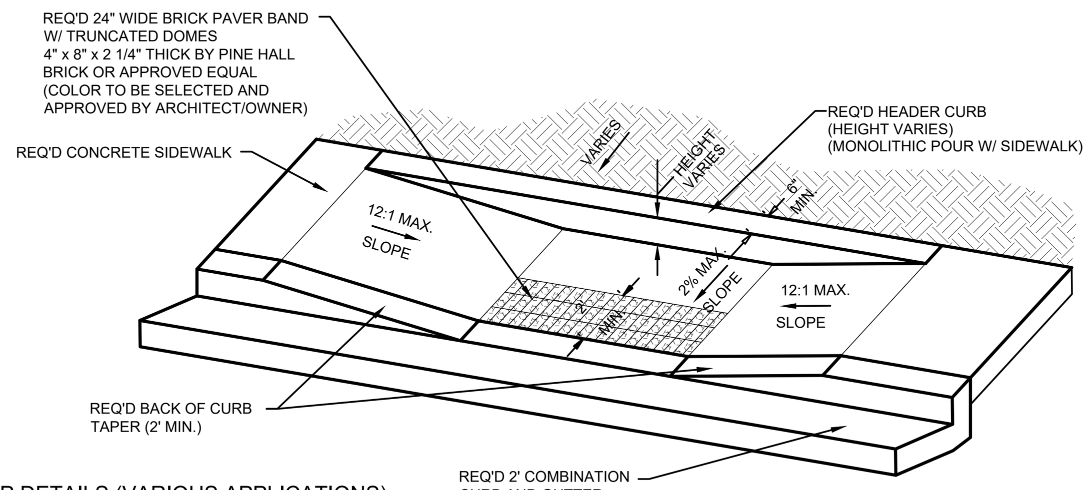
NOTES:
1. EXPANSION JOINT REQ'D. @ 20' INTERVALS. HAND TOOLED SCORE/CONTRACTION JOINTS SHALL BE INSTALLED @ 5' O.C. OR SPACED AT AN O.C. DIMENSION EQUAL TO THE SIDEWALK WIDTH.
2. PLACE EXPANSION JOINT AT FACE OF BUILDINGS AND TIES TO EXISTING SIDEWALKS.
3. SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
4. THE CONTRACTOR SHALL PROVIDE A FINISH WITH NO REINFORCING FIBER HAIRS EXPOSED ON THE FINISHED SURFACE. THE CONCRETE SHALL BE RUBBED AS NECESSARY TO ELIMINATE ANY EXPOSED FIBERS.
5. REQUIRED SIDEWALK STONE BASE LAYER TO BE NO. 8910 OR DENSE GRADE BASE COMPACTED TO 100% STANDARD PROCTOR. PLACE STONE BASE UNDER ALL CONCRETE SIDEWALK AND PAVERS AND CONCRETE SUBBASE.ALL STONE SHALL BE MECHANICALLY COMPACTED IN PLACE, NO EXCEPTIONS.

CONCRETE SIDEWALK TYPICAL DETAIL

NOT TO SCALE



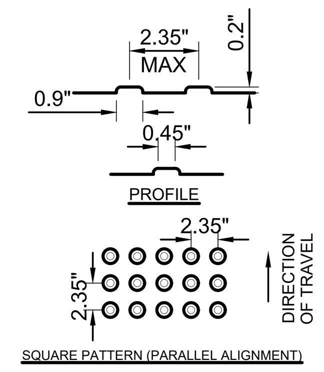
SECTION "XX"



HANDICAP RAMP DETAILS (VARIOUS APPLICATIONS)

NOT TO SCALE

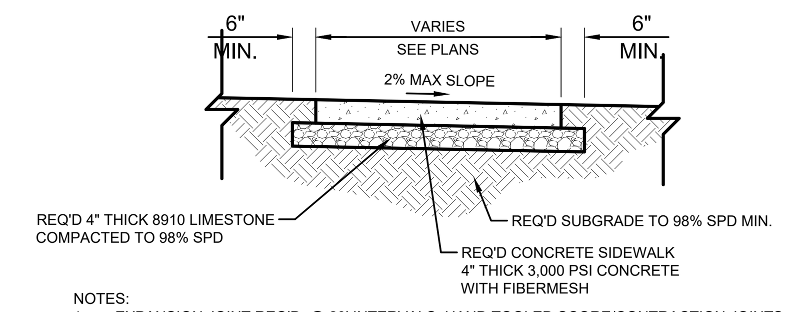
NOTES:
1. CURB RAMP LENGTH DEPENDS ON THE HEIGHT OF CURBING.
2. THE CONTRACTOR MUST MEET TRUNCATED DOME PATTERN DIMENSIONS ON ALL HANDICAP RAMPS AS SHOWN IN THE DETAIL.
3. WHEN INSTALLING THE BRICK PAVERS THE CONTRACTOR SHALL USE THE 3/8" MORTAR/ GROUT BED WITH 3/8" MORTAR/ GROUT JOINT INSTALLATION METHOD SUITABLE FOR HIGH TRAFFIC AND DRIVE-OVERS BY VEHICLES. THIS INSTALLATION METHOD SHALL BE USED TO BED THE BRICK PAVERS ON THE SPEED TABLES ACCESSING THE PARKING LOT.
* 4. CONTRACTOR SHALL ACCOUNT FOR PAVER THICKNESS AND MORTAR/GROUT BED THICKNESS TO INSURE THAT AFTER INSTALLATION OVER THE CONCRETE SUBBASE THERE IS A FLUSH TRANSITION WITH THE BACK OF THE CONCRETE GUTTER.
* 5. CONTRACTOR SHALL INSTALL AN ON-SITE SAMPLE HANDICAP RAMP AREA TO VERIFY THE BRICK AND MORTAR COLOR AND ESTABLISH THE QUALITY STANDARD FOR PAVER INSTALLATION AND CONCRETE INSTALLATION THROUGHOUT THE PROJECT.
* 6. MORTAR AND BRICK COLOR TO BE SELECTED AND APPROVED BY ARCHITECT/OWNER.
7. IF HEADER CURB HEIGHT EXCEEDS ONE (1) FOOT THE CONTRACTOR SHALL SUBMIT TO THE OWNERS REPRESENTATIVE THE PROPOSED HEADER WALL DESIGN FOR APPROVAL.
8. WHERE PROVIDED CURB RAMP FLARES SHALL NOT BE STEEPER THAN 10:1.
9. IN ALTERATIONS, WHERE THERE IS NO LANDING AT THE TOP OF CURB RAMPS, CURB RAMP FLARES SHALL BE PROVIDED AND SHALL NOT BE STEEPER THAN 12:1.



1. DOMES SHALL BE PARALLEL TO THE RAMP SO THAT THE WHEELCHAIR WHEELS CAN TRAVEL BETWEEN THE DOMES.
2. DISTANCE BETWEEN DOMES SHALL BE 1.6" TO 2.35" MAX.

PLAN

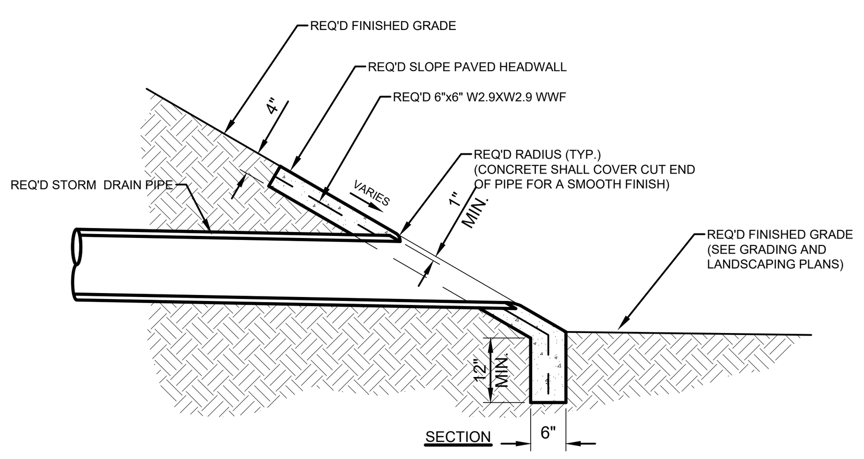
TRUNCATED DOME PATTERNS

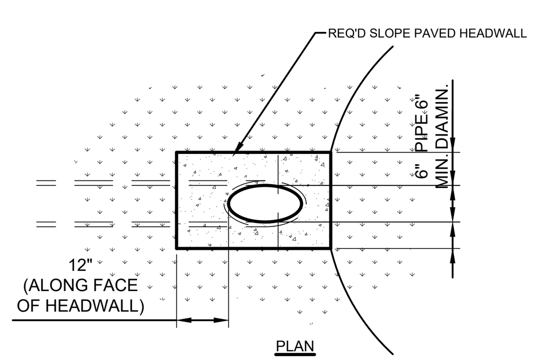


NOTES:
1. EXPANSION JOINT REQ'D. @ 20' INTERVALS. HAND TOOLED SCORE/CONTRACTION JOINTS SHALL BE INSTALLED @ 5' O.C. OR SPACED AT AN O.C. DIMENSION EQUAL TO THE SIDEWALK WIDTH.
2. CONTRACTION JOINTS SHALL BE HAND-TOOLED ONLY IN LOCATIONS AS INDICATED BY THE ARCHITECTS SCORING PATTERN. JOINTS SHALL BE INSTALLED AT A DEPTH OF 1/4 THICKNESS OF THE SLAB MIN. NO SAW-CUT OF JOINTS IS ALLOWED.
3. PLACE EXPANSION JOINT AT FACE OF BUILDINGS AND TIES TO EXISTING SIDEWALKS.
4. SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
5. THE CONTRACTOR SHALL PROVIDE 3 MOCKUP PANELS (AT MINIMUM 3' X 3' IN SIZE) THAT HE FLOATS LIGHT BROOM, MEDIUM BROOM, AND HEAVY BROOM. THE OWNER WILL CHOOSE THE FINISH THEY DESIRE FOR THE PROJECT AND THE CONTRACTOR WILL PROCEED AS DIRECTED.
6. THE CONTRACTOR SHALL PROVIDE A FINISH WITH NO REINFORCING FIBER HAIRS EXPOSED ON THE FINISHED SURFACE. THE CONCRETE SHALL BE RUBBED AS NECESSARY TO ELIMINATE ANY EXPOSED FIBERS.
7. THE CONTRACTOR SHALL ALSO ALLOW THE OWNER TO CHOOSE BETWEEN DIFFERENT EXPANSION JOINT MATERIALS. THE TWO BASIC OPTIONS SHALL BE BLACK BOARD AND WOOD. THE CONTRACTOR MAY SUBMIT ANOTHER OPTION.
8. REQUIRED SIDEWALK STONE BASE LAYER TO BE NO. 8910 OR DENSE GRADE BASE COMPACTED TO 100% STANDARD PROCTOR. PLACE STONE BASE UNDER ALL CONCRETE SIDEWALK AND PAVERS AND CONCRETE SUBBASE.ALL STONE SHALL BE MECHANICALLY COMPACTED IN PLACE, NO EXCEPTIONS.
9. THE CONTRACTOR SHALL REFERENCE THE PLANS FOR THE CONCRETE SIDEWALK SCORING PATTERN. THE CONTRACTOR SHALL MATCH THIS PATTERN AS SHOWN.

CONCRETE SIDEWALK TYPICAL DETAIL

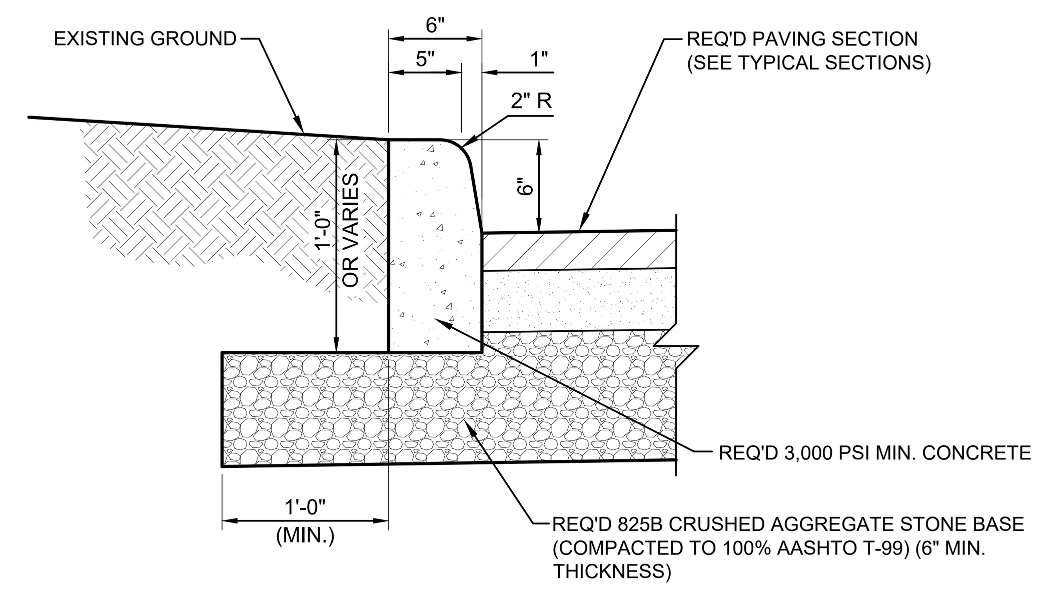
NOT TO SCALE





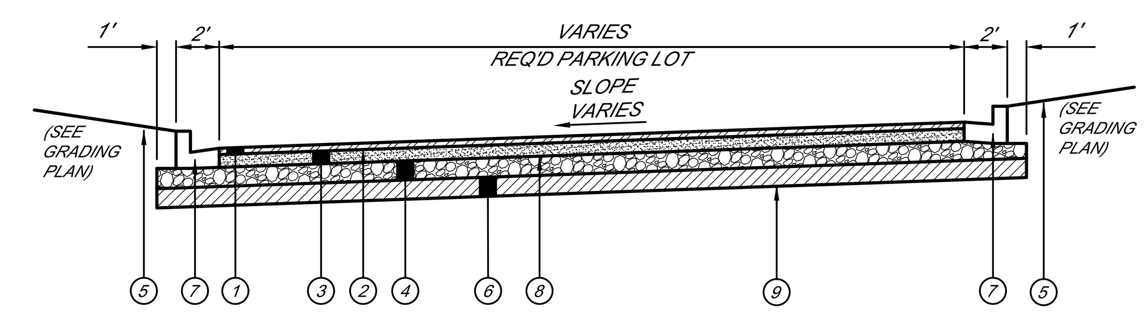
SLOPE PAVED HEADWALL DETAIL (SMALL DIAMETER PIPE)

NOT TO SCALE



STANDUP CURB

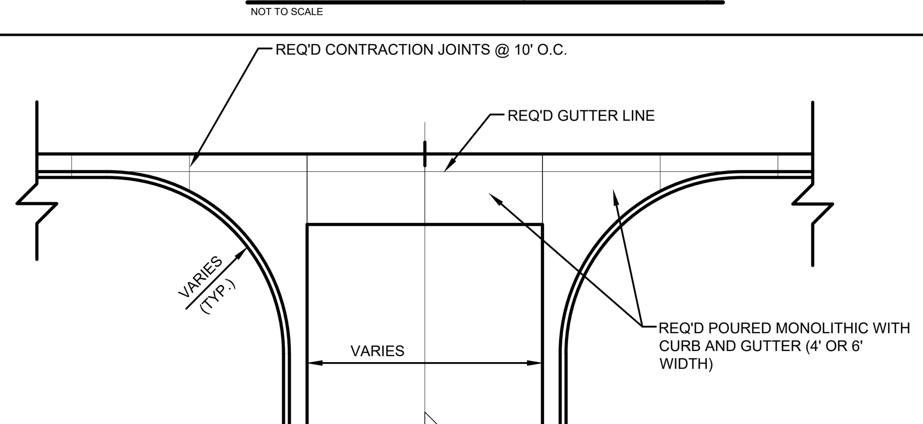
NOT TO SCALE

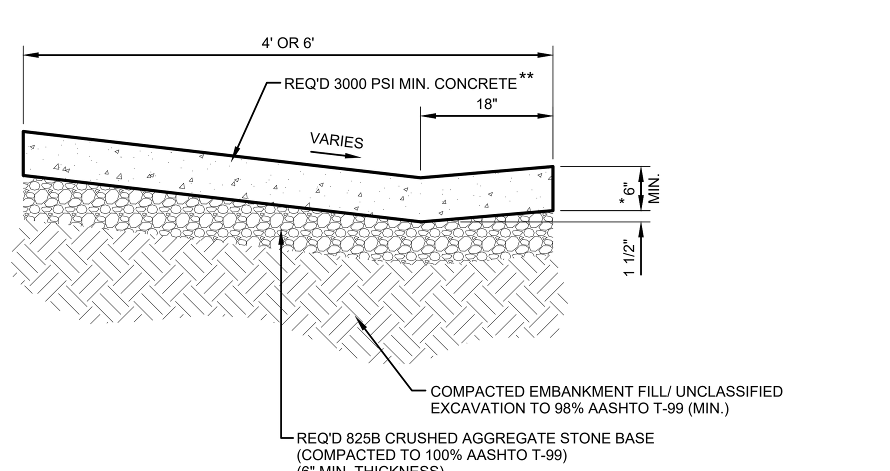


TYPICAL LIGHT DUTY ASPHALT PAVING SECTION

NOT TO SCALE

1. REQ'D: SUPERPAVE BITUMINOUS WEARING SURFACE LAYER, 1/2" MAXIMUM AGGREGATE SIZE MIX (ALDOT 424A)(1" COMPACTED THICKNESS)
2. REQ'D: TACK COAT (TRACKLESS TACK) (ALDOT 405A)(0.10 GAL/SY)
3. REQ'D: SUPERPAVE BITUMINOUS BINDER LAYER, 1" MAXIMUM AGGREGATE SIZE MIX (ALDOT 424B)(2" COMPACTED THICKNESS)
4. REQ'D: CRUSHED AGGREGATE STONE BASE COURSE (ALDOT 825B)(6" COMPACTED THICKNESS) (COMPACTED TO 100% SPD)
5. REQ'D: TOPSOIL (6" MIN. THICKNESS)
6. REQ'D: SUBGRADE (ROADBED PROCESSED, COMPACTED TO 98% AASHTO T-99)(6" MIN THICKNESS)(AS DIRECTED BY THE OWNER'S REPRESENTATIVE)
7. REQ'D: CONCRETE COMBINATION CURB AND GUTTER
8. REQ'D: BITUMINOUS TREATMENT "A" (ALDOT SECTION 401D)
9. REQ'D: UNCLASSIFIED/BORROW EXCAVATION (COMPACTED TO 98% AASHTO T-99)





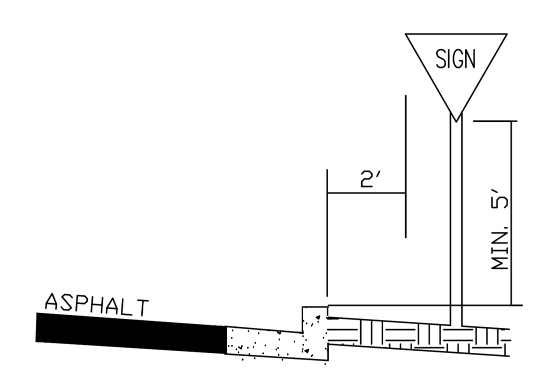
NOTES:
1. EXPANSION JT. REQ'D. @ 50' INTERVALS. CONTRACTION JOINTS SHALL BE SAWCUT 2" DEEP BY 1/8" WIDE AND SHALL BE 10' O.C.
2. THE CONTRACTOR SHALL MATCH THE DIMENSIONS AND PROFILE OF THE EXISTING COMBINATION CURB AND GUTTER. GUTTER THICKNESS SHALL BE 6" MINIMUM. (IF APPLICABLE)
3. ALL ROADWAY CURB AND GUTTERS TO BE INSTALLED ON CRUSHED AGGREGATE STONE BASE COURSE (ALDOT SECTION 825, TYPE B)(6" MIN. THICKNESS)(COMPACTED TO 100% AASHTO T-99) UNLESS OTHERWISE DIRECTED ON ROADWAY TYPICAL SECTIONS.

VALLEY GUTTER

NOT TO SCALE

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANNING, COORDINATING AND PERFORMING THE WORK OF PROTECTING THE PROJECT AND THE ADJOINING PROPERTIES FROM SOIL EROSION AND SILTATION BY CONSTRUCTING BERMS, NETS, ETC., AS THEY BECOME NECESSARY TO CORRECT OR PREVENT SUCH PROBLEMS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, ERECTING, LIGHTING, AND MAINTAINING ALL CONSTRUCTION SIGNS (WARNING, REGULATOR AND GUIDE), BARRICADES AND OTHER TRAFFIC CONTROL DEVICES TO COMPLY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) DURING CONSTRUCTION. THE CONTRACTOR HAS THE RESPONSIBILITY TO CONTINUOUSLY REVIEW AND MAINTAIN TRAFFIC HANDLING MEASURES FOR THE SAFETY OF THE PUBLIC AND HIS WORKMEN. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE EMPLOYEE SAFETY AND HEALTH REGULATIONS AS SET FORTH BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
3. ALL MATERIAL DESIGNATED BY THE ENGINEER AS WASTE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
4. THE OWNER SHALL PAY FOR ALL REQUIRED SOIL TESTING FOR COMPACTION TESTS ON ROADWAY, FILL AND TRENCH BACKFILL PERFORMED BY THE TESTING FIRM. ALL COST FOR RETESTING SHALL BE AT THE CONTRACTOR'S EXPENSE.
5. ALL FILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM D-698 IN MAXIMUM 6" LIFTS.
6. ALL DISTURBED AREAS SHALL BE GRADED, DRESSED, FERTILIZED AND SEEDED ACCORDING TO SECTION 652 (SEEDING) OF THE ASHD STANDARD SPECIFICATIONS. A SATISFACTORY STAND OF GRASS WILL BE REQUIRED PRIOR TO ACCEPTANCE BY THE OWNER'S REPRESENTATIVE.
7. PRIOR TO BEGINNING CONSTRUCTION, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE ALL UTILITY LINES LOCATED. THE UTMOST CARE SHALL BE TAKEN TO PREVENT DAMAGE TO THE EXISTING UTILITY SERVICES. ALL DAMAGE TO EXISTING UTILITIES WILL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE. (ALABAMA LINES LOCATION CENTER PH # 1-800-292-8525)
8. ALL UTILITY LINE TRENCHES SHALL BE BACKFILLED AND COMPACTED IN 6" LIFTS TO AT LEAST 95% STANDARD DENSITY PER ASTM D-698.



SIGN PLACEMENT DETAIL

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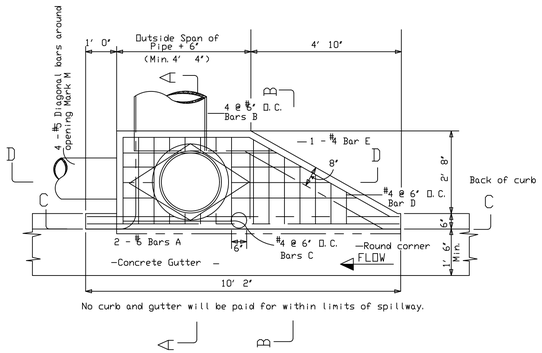
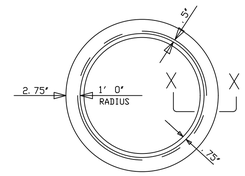
Sheet Title:
SITE DETAILS

Date: 11/12/2021

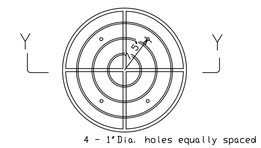
Sheet No.:
5 of 7



PLAN - TYPE A



PLAN OF RING



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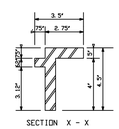
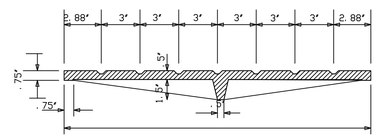
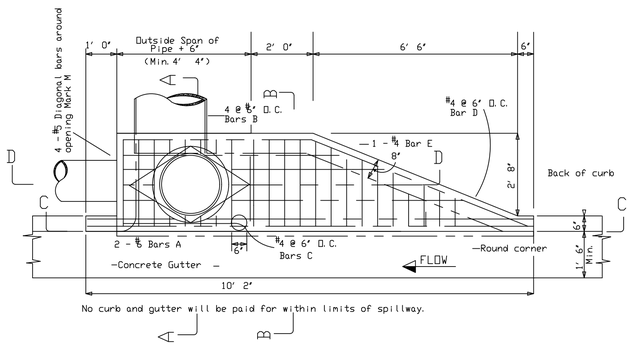


SECTION X - X



SECTION Y - Y



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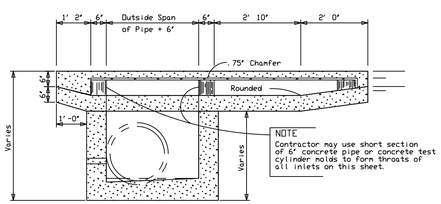
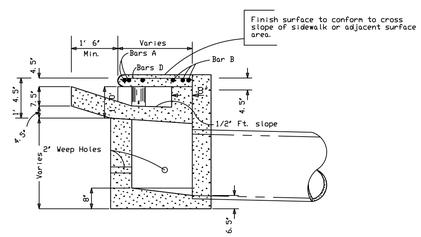
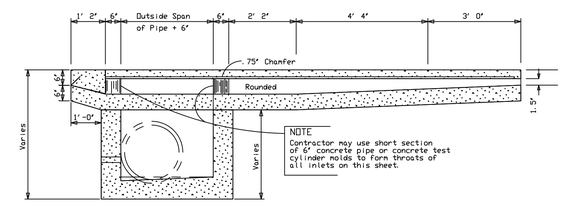


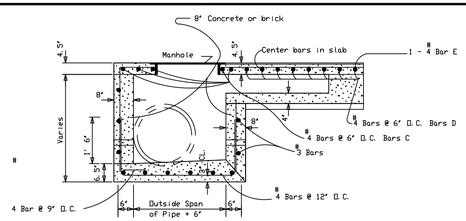
SECTION C - C TYPE A



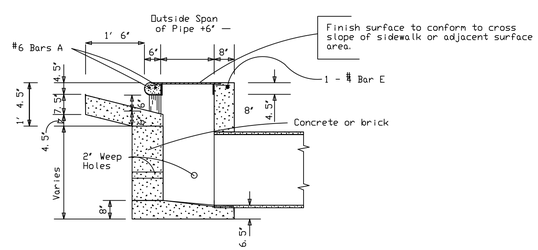
SECTION B-B TYPE A AND B



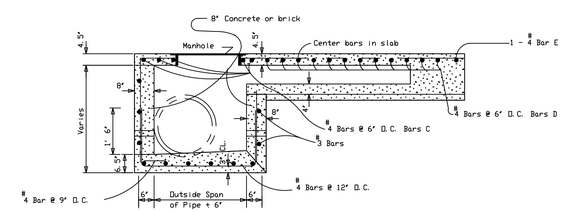
SECTION C - C TYPE B



SECTION D - D TYPE A



SECTION A-A TYPE A AND B



SECTION D - D TYPE A

NOTES

1. CONCRETE PEDESTAL SHALL BE POURED IN PLACE. ROUND FORM MAY BE CONSTRUCTED OF METAL, PLASTIC, OR OTHER APPROVED MATERIAL. A 6 INCH DIAMETER PIPE SHELL FILLED WITH CONCRETE WILL NOT BE APPROVED.
2. PIPE MAY CONNECT WITH INLETS FROM ANY DIRECTION, AND AS MANY CONNECTIONS SHALL BE MADE AS NECESSARY.
3. MANHOLE FRAME AND COVER SHALL BE AN APPROVED STANDARD CAST IRON DESIGN.
4. A MINIMUM OF THREE (3) 5/8 INCH STEEL LADDER BARS OF AN APPROVED DESIGN ARE REQUIRED IN ALL INLETS WHERE HEIGHT IS GREATER THAN 4'-0".
5. TWO (2) INCH MINIMUM WEEP HOLES SHALL BE CONSTRUCTED IN INLETS AS DIRECTED BY THE ENGINEER TO FACILITATE SUBGRADE DRAINAGE.
6. INLET DIMENSIONS MUST BE INCREASED TO ACCOMMODATE LARGER PIPE.
7. WHERE DIRECTION OF FLOW IS FROM EACH END OF INLET, SIDE WING (SINGLE WING SHOWN) OPENINGS SHALL BE CONSTRUCTED AT EACH END OF INLET, FOR EACH INLET SO CONSTRUCTED.
8. ALL INLETS SHALL BE CONSTRUCTED OF CONCRETE OR CONCRETE BLOCK. ALL CONCRETE SHALL BE CLASS A (3000 psi @ 28 DAYS).
9. A TWO (2) INCH TEMPORARY DRAIN PIPE IS TO BE USED DURING STREET CONSTRUCTION. THE DRAIN PIPE SHOULD BE SEALED AFTER PAVING IS COMPLETE.
10. BRICK WALLS SHALL RECEIVE 1/2" CEMENT GROUT ON INTERIOR AND EXTERIOR.

REVISIONS		
NO.	DATE	REMARKS

ALABAMA LICENSED PROFESSIONAL ENGINEER
No. 24489
11/12/21
RUSSELL D. WARE, JR.

YELLOWHAMMER ENGINEERING
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Parking Improvements
Phase I

OWNER/DEVELOPER:
Northport Housing Authority
3500 West Circle, Suite 39
Northport, AL. 35476

NORTHPORT, ALABAMA
NOVEMBER 2021

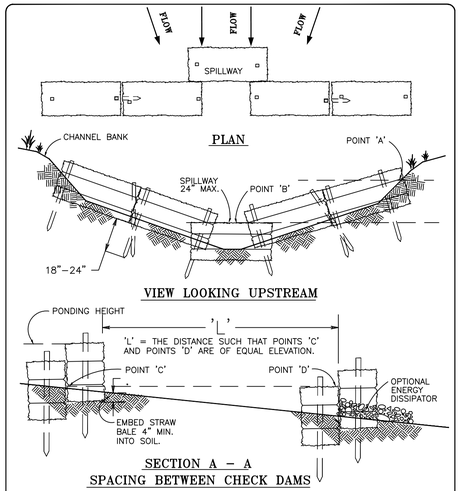
Sheet Title:

S-INLET DETAILS

Date: 11/12/2021

Sheet No.:

6 of 7



NOTES:
1. EMBED BALES 4" INTO THE SOIL AND 'KEY' BALES INTO THE CHANNEL BANKS.
2. POINT 'A' MUST BE HIGHER THAN POINT 'B'. (SPILLWAY HEIGHT)
3. PLACE BALES PERPENDICULAR TO THE FLOW WITH ENDS TIGHTLY ABUTTING. USE STRAW, ROCKS OR FILTER FABRIC TO FILL ANY GAPS AND TAMP BACKFILL MATERIAL TO PREVENT EROSION OR FLOW AROUND THE BALES.
4. SPILLWAY HEIGHT SHALL NOT EXCEED 24".
5. INSPECT AFTER EACH SIGNIFICANT STORM, MAINTAIN AND REPAIR PROMPTLY.

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FILE: GULLY03

STRAW BALE CHECK DAM

ROCK, LOG AND STRAW BALE CHECK DAMS

Construction Standards

Obtain appropriate permits or approvals from local or state regulatory agencies.

The maximum spacing between the dams shall be such that the toe of the upstream dam is at the same elevation as the top of the downstream dam.

Rock dams shall be constructed of 2 to 15–inch rock. Keep the center rock (spillway) section at least 6 inches lower than the outer edges.

Extend the abutments 18" into the channel bank.

Straw bales shall be placed in a single row, lengthwise, oriented perpendicular to the flow, with the ends of adjacent bales tightly abutting one another.

Straw bale dams shall be extended such that the bottoms of the end bales are higher in elevation than the top of the middle bale spillway to ensure that sediment–laden runoff will flow over the barrier, and not around it.

Each straw bale shall be embedded in the soil a minimum of 4 inches. Use straw, rocks, or filter fabric to fill any gaps between the bales and tamp the backfill material to prevent erosion under or around the bales.

If the straw bales are wire bound, they should be oriented so the bindings are around the sides rather than along the top and bottom. Wire bindings that are placed in contact with the soil soon disintegrate and may allow the bale to fall apart.

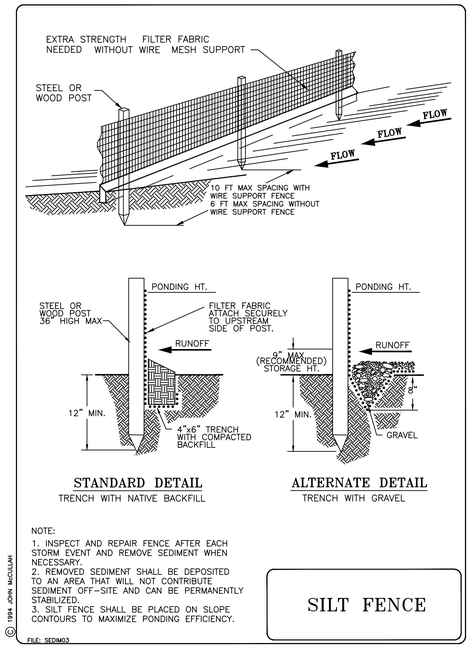
Construct an energy dissipator to reduce downstream erosion.

Inspection and Maintenance

The check dams shall be inspected for damage periodically during the winter and after each significant storm (1" in 24 hours). Prompt repairs shall be made to ensure that the dam is functioning properly. Any erosion caused by flows around the edges of the dam or under the structure shall be corrected immediately.

Remove sediment from behind the dams when they become 60 percent full, or as needed. The removed sediment shall be deposited in an area that will not contribute sediment off site and can be permanently stabilized.

Remove checkdams and stakes when stabilization is complete.



NOTE:
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF–SITE AND CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

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FILE: SEDIM03

SILT FENCE

SILT FENCE

Construction Specifications

The height of a silt fence shall not exceed 36 inches. Storage height shall never exceed 18".

The fence line shall follow the contour as closely as possible.

If possible, the filter fabric shall be cut from a continuous roll to avoid the use of joints. When joints are necessary, filter cloth shall be spliced only at a support post, with a minimum 6–inch overlap and both ends securely fastened to the post.

Posts shall be spaced a maximum of 10 feet apart and driven securely into the ground (minimum of 12 inches). When extra strength fabric is used without the wire support fence, post spacing shall not exceed 6 feet.

Turn the ends of the fence uphill.

A trench shall be excavated approximately 4 inches wide and 6 inches deep along the line of posts and upslope from the barrier.

When standard–strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least 1 inch long, tie wires or hog rings. The wire shall extend into the trench a minimum of 2 inches and shall not extend more than 36 inches above the original ground surface.

The standard–strength filter fabric shall be stapled or wired to the fence, and 6 inches of the fabric shall extend into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

When extra–strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts.

The trench shall be backfilled and the soil compacted over the toe of the filter fabric.

Silt fences placed at the toe of a slope shall be set at least 6 feet from the toe in order to increase ponding volume.

Silt fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized, and any sediment stored behind the silt fence has been removed.

Inspection and Maintenance

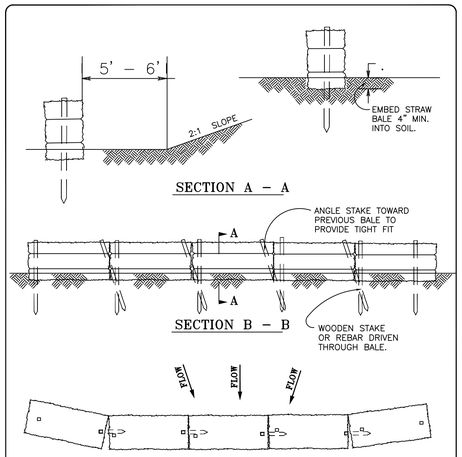
Silt fences and filter barriers shall be inspected weekly and after each significant storm (1" in 24 hr.). Any required repairs shall be made immediately.

Sediment shall be removed when it reaches 1/3 height of the fence or 9 inches maximum.

The removed sediment shall vegetate or otherwise stabilized.

GENERAL NOTES

1. The Contractor shall be responsible for planning, coordinating and performing the work of protecting the project and the adjoining properties from soil erosion and siltation by constructing berms, silt fences, diversion ditches, settling basins, etc., as they become necessary to correct or prevent such problems (No direct payment unless noted otherwise)
2. Erosion of this site shall be controlled as follows:
   1. Selective disturbance of the site will minimize possible erosion.
   2. Diversion ditches & berms shall be placed around the site as needed to divert water away from the area of actual construction.
   3. Techniques such as the use of haybales, silt fence, check dams, gravel filter berms, terraces, etc.
   4. A settling basin may serve as a final method of preventing eroded material from leaving the site if necessary.
3. Should the Contractor fail to implement the necessary measures to control siltation /erosion on the site all construction activities shall be stopped until the appropriate measures are taken as directed by the Engineer or Local Authorities.
4. To maintain erosion control measures the Contractor shall:
   1. Inspect all control measures at least once each week and following any storm event of 0.5 inches or more.
   2. Repair any defects noted within 24 hours of report.
   3. Sediment buildup shall be closely monitored at silt fences, sediment basins, etc. and removed accordingly.
   4. Diversion dikes and swales shall be inspected and repaired as necessary.
   5. Temporary and permanent seeding and planting areas will be inspected for bare spots, washouts & healthy growth.
5. Silt fence, hay bales, rip–rap and other control measures will be used as necessary during construction to help prevent silt from leaving the site.
6. All disturbed areas will be seeded and mulched as necessary after grading and clearing is completed.



NOTES:
1. THE STRAW BALES SHALL BE PLACED ON SLOPE CONTOUR.
2. BALES TO BE PLACED IN A ROW WITH THE ENDS TIGHTLY ABUTTING. USE STRAW, ROCKS, OR FILTER FABRIC TO FILL GAPS BETWEEN THE BALES AND TAMP THE BACKFILL MATERIAL TO PREVENT EROSION OR FLOW AROUND BALES.

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FILE: SEDIM02

STRAW BALE DIKE

STRAW BALE DIKE

Construction Specifications

The bales shall be placed on the slope contour at the base of the slope or around the perimeter of the construction site. If the dike is constructed at the toe of a slope, place it 5 to 6 ft. away from the slope if possible.

Do not construct the dike more than one bale high.

Bales shall be placed in a row with the ends tightly abutting.

Each bale shall be embedded in the soil a minimum of 4 inches. Use straw, rocks, or filter fabric to fill any gaps between the bales and tamp the backfill material to prevent erosion under or around the bales.

If the bales are wire bound, they should be oriented so the bindings are around the sides rather than along the top and bottom. Wire bindings that are placed in contact with the soil soon disintegrate and may allow the bale to fall apart.

The bales shall be securely anchored in place by two wooden stakes or rebar driven through the bales. The first stake in each bale shall be driven toward the previously laid bale to force the bales tightly together. Drive the stakes at least 18 inches into the ground.

The straw bales do not need to be anchored if all of the following conditions apply:

The slope length is less than 100 feet;

The bales are used on a relatively flat construction area and the straw bale dike is inspected regularly;

The trapped sediment is removed when required, and repairs are made promptly;
or
If the bales are to be removed and replaced daily to facilitate construction.

Inspection and Maintenance

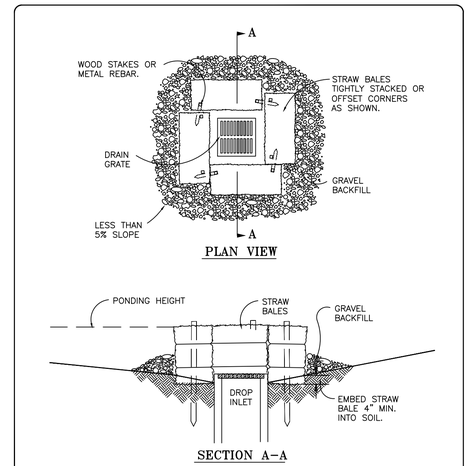
The straw bale dikes shall be inspected weekly and after each significant storm (1" in 24 hr).

Repairs and/or replacement shall be made promptly.

Remove the straw bales when the upslope areas have been permanently stabilized.

Remove sediment behind barrier when it reaches a depth of 6 inches.

Sediment shall be removed and deposited in an area that will not contribute sediment offsite.



NOTES:
1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%)
2. EMBED THE BALES 4" INTO THE SOIL AND OFFSET CORNERS OR PLACE BALES WITH ENDS TIGHTLY ABUTTING. GRAVEL BACKFILL WILL PREVENT EROSION OR FLOW AROUND THE BALES.
3. THE TOP OF THE STRUCTURE (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BY–PASSING THE INLET. EXCAVATION OF A BASIN ADJACENT TO THE DROP INLET OR A TEMP–ORARY DIKE ON THE DOWNSLOPE OF THE STRUCTURE MAY BE NECESSARY.

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FILE: SEDIM06

STRAW BALE/GRAVEL DROP INLET SEDIMENT BARRIER

DROP INLET SEDIMENT BARRIERS

Construction Specifications

Straw Bale Barrier

Excavate a 4–inch deep trench around the inlet and make the trench as wide as a straw bale in order to embed the bales properly.
Orient the straw bales with the bindings around the sides of the bales so the wire does not come in contact with the soil.

Place bales lengthwise around the inlet and press the ends of adjacent bales together. The bales may be loosely joined if more gravel is utilized.

Drive two 2–by 2–inch stakes through each bale to anchor the bale securely in place.

Utilize 3/4 inch to 2 inch gravel to fill the void spaces between the bales if necessary to dewater the ponded area more rapidly.

Silt Fence Sediment Barrier

Support posts for a silt fence must be steel fence posts or 2 by 4inch wood, length 3' minimum, spacing 3' maximum, with a top frame support recommended.
Excavate a trench 4 inches wide and 6 inches deep and bury the bottom of the silt fence in the trench.

Backfill the trench with gravel or soil. Compact backfill well.

The height of the silt fence shall be a maximum of 1.5' measured from the top of the inlet.

Inspection and Maintenance

Inspect the barrier after each rain and promptly make repairs as needed.

Sediment shall be removed after each significant storm (1" in 24 hours) to provide adequate storage volume for the next rain.

The removed sediment shall be deposited in an area that will not contribute sediment off–site and can be permanently stabilized.

For gravel filters: If the gravel becomes clogged with sediment it must be carefully removed from the inlet and either cleaned or replaced.

REVISIONS		
NO.	DATE	REMARKS

ALABAMA LICENSED PROFESSIONAL ENGINEER NO. 24483 11/12/21 RUSSELL D. WARE, JR.

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Parking Improvements
Phase I

OWNER/DEVELOPER:
Northport Housing Authority
3500 West Circle, Suite 39
Northport, AL. 35476

NORTHPORT, ALABAMA
NOVEMBER 2021

Sheet Title:
EROSION CONTROL DETAILS

Date: 11/12/2021

Sheet No.:
7 of 7

GENERAL ELECTRICAL LEGEND

FIXTURE OUTLET – POLE LIGHT FIXTURE – QUANTITY AND ORIENTATION(S) OF LUMINAIRES AS INDICATED ON PLANS.

FIXTURE DESIGNATIONS:

A FIXTURE TYPE "A" – MAY BE USED WITH OTHER TYPES.
2 CIRCUIT NUMBER – MAY BE USED WITH OTHER NUMBERS.

BRANCH/FEEDER CIRCUIT – CONCEALED IN WALLS OR CEILING.

BRANCH/FEEDER CIRCUIT – EXPOSED ON WALLS OR CEILING.

BRANCH/FEEDER CIRCUIT – CONCEALED IN FLOOR SLAB OR DIRT FILL.

BRANCH/FEEDER CIRCUIT – HOMERUN SHOWN OTHERWISE. 2 #12 & 1 #12G, 3 #12 & 1 #12G, ETC. UNLESS

10 BRANCH/FEEDER CIRCUIT – HOMERUN BE USED WITH OTHER WIRE SIZES. 10 2 #10 & 1 #10G, 10 3 #10 & 1 #10G, ETC. – MAY

POWER DISTRIBUTION EQUIPMENT.

LOAD CENTER – SURFACE MOUNTED.

TS TIME SWITCH – 3.P.S.T. – 208/277VAC – 40A – WITH ASTRONOMIC DIAL AND RESERVE POWER – TORK 7302ZL.

A / E1 DETAIL DESIGNATOR – "A" INDICATED DETAIL MARK – "E1" INDICATES SHEET NUMBER WHERE DETAIL IS LOCATED (TYPICAL).

GENERAL ABBREVIATIONS:

EX	EXISTING TO REMAIN.
EX–R	EXISTING TO BE REMOVED – REMOVE ALL ASSOCIATED ELECTRICAL EQUIPMENT, DEVICES, CONDUIT AND WIRING CONNECTIONS TO OTHER ELECTRICAL ITEMS UNLESS SHOWN OTHERWISE.
EX–RL	EXISTING TO BE RELOCATED – REMOVE ALL ASSOCIATED ELECTRICAL EQUIPMENT, DEVICES, CONDUIT AND WIRING AT EXISTING LOCATION. RELOCATE ITEM TO NEW LOCATION SHOWN ON ELECTRICAL PLANS. EXTEND AND RECONNECT EXISTING CONDUIT, WIRING, ETC. TO NEW LOCATION AS REQUIRED UNLESS SHOWN OTHERWISE.

ELECTRICAL ABBREVIATIONS:

A	AMPERES.	NSV	NEW, SPARE OR VACATED.
AIC	AMPERES INTERRUPTING CAPACITY.	OC	ON CENTER.
AFF	ABOVE FINISHED FLOOR.	P	POLES.
AL	ALUMINUM.	PF	POWER FACTOR.
ATS	AUTOMATIC TRANSFER SWITCH.	ø	PHASE.
AWG	AMERICAN WIRE GAUGE.	PVC	POLYVINYL CHLORIDE.
C	CONDUIT.		
CU	COPPER.	SLD	SINGLE LINE DIAGRAM.
EC	EMPTY CONDUIT. OR ELECTRICAL CONTRACTOR	SS	STAINLESS STEEL.
		UL	UNDERWRITERS LABORATORY.
FPN	FUSE PER NAMEPLATE.	UNO	UNLESS NOTED OTHERWISE.
G	GROUND CONDUCTOR.	V	VOLTS.
KVA	KILOVOLT–AMPERES.	W	WIRES.
KW	KILOWATT.		
LV	LOW VOLTAGE.	CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED.
MCM	THOUSAND CIRCULAR MILS.		
MV	MEDIUM VOLTAGE.	CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED.
N	NEUTRAL.		
NEC	NATIONAL ELECTRICAL CODE.	OFOI	OWNER FURNISHED, OWNER INSTALLED.
NEMA	NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION.		
		OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED.
NIC	NOT IN CONTRACT.		

GENERAL ELECTRICAL NOTES

1. CONTRACTOR SHALL VERIFY ALL REQUIREMENTS FOR POWER SERVICE WITH UTILITY COMPANY PRIOR TO SUBMITTING BID. IF THEIR REQUIREMENTS ARE AT A VARIANCE WITH THOSE SHOWN ON PLANS THE CONTRACTOR SHALL INFORM ENGINEER IMMEDIATELY. ALL COSTS INCURRED WITH THE UTILITY COMPANY FOR SERVICE SHALL BE INCLUDED IN BID PRICE. IF SUCH COSTS ARE NOT AVAILABLE AT BID TIME CONTRACTOR SHALL INCLUDE WITH BID A LETTER FROM A RESPONSIBLE PARTY WITH THE UTILITY COMPANY STATING SUCH, AND COSTS WILL THEN BE EXCLUDED FROM THE BID PRICE.
2. CONTRACTOR SHALL VISIT THE SITE OF THE WORK PRIOR TO SUBMITTING BID TO EXAMINE CAREFULLY LOCAL CONDITIONS AND DIFFICULTIES TO BE ENCOUNTERED. ANY DISCREPANCY BETWEEN PLANS AND EXISTING CONDITIONS SHALL IMMEDIATELY BE CALLED TO THE ATTENTION OF THE ENGINEER.
3. ALL EQUIPMENT SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH NEC.
4. REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AND WIRING MADE OBSOLETE BY THIS RENOVATION AND DISPOSE OF AS DIRECTED BY THE ENGINEER.
5. THIS CONTRACTOR SHALL FURNISH ALL MATERIALS AND LABOR NECESSARY TO EXTEND CIRCUITS AND MAKE RECONNECTIONS TO ANY ACTIVE ELECTRICAL DEVICES ON WHICH THE BRANCH CIRCUIT IS INTERRUPTED BY THIS ALTERATION. CARE SHALL BE TAKEN TO INSURE THAT EXISTING PANEL AND FEEDER RATINGS ARE NOT EXCEEDED.

ELECTRICAL SPECIFICATIONS

Section 16050 - Basic Electrical Materials and Methods

A. General Requirements:
1. Carefully examine General Conditions, other specification sections, and other drawings (in addition to Electrical) in order to be fully acquainted with their effect on electrical work.
2. Do all work in compliance with all applicable codes, laws, and ordinances, the National Electrical Safety Code, the National Electrical Code (hereinafter referred to as "Code"), and the regulations of the local utility companies. Obtain and pay for any and all required permits, inspections, certificates of inspections and approval, and the like.
3. Cooperate with other trades and contractors at job. Perform work in such manner and at such times as not to delay work of other trades. Complete all work as soon as the structure and installations of equipment will permit. Patch, in a satisfactory manner and by the proper craft, any work damaged by electrical workmen.
4. Electrical contracting firm shall be licensed as an electrical contractor in the state where work will be performed

B. General Scope of Electrical Work (Refer to drawings for other specific scope items)
1. Furnish all labor and materials to complete electrical work as shown on drawings and/or herein specified.
2. Remove all existing electrical equipment and wiring made obsolete by this project and remove or relocate all electrical services located on or crossing through the project property, either above or below grade, which would obstruct the construction of the project or conflict in any manner with the completed project or any code pertaining thereto. Dispose of salvageable materials as directed by the Architect.
3. Furnish and install complete power, telephone and other electrical services and all electrical systems as shown on drawings and/or specified herein.
4. Pay all electrical utility company service charges (if any) in connection therewith, including permanent meter deposit. Meter deposits will be refunded to Contractor at time of Owner's acceptance.
5. Procure and pay for permits and certificates as required by local and state ordinances and fire underwriter's certificate of inspection.
6. Complete field testing, adjustment & startup of all systems listed above as shown on drawings and/or specified herein.

C. Approved Materials and Devices:
1. Where not otherwise specified, provide only new, standard, first-grade materials throughout, conforming to standards established by Underwriter's Laboratories, Inc., and so marked or labeled, together with manufacturer's brand or trademark. All equipment subject to approval of Architect before installation. All like items and associated equipment shall be of one manufacturer.

D. Submittals:
1. All submittals to the design team shall be accompanied by a letter summarizing all proposed deviations from specified products or pre-approved substitutions. The absence of such a letter shall be understood to indicate that the contractor intends to meet all contract requirements, regardless of cut-sheets/data-sheets provided within the submittal.
2. Submit to Prime Consultant ten (10) days prior to bid date three (3) copies of any items and/or manufacturers which are proposed as substitutes for those specified.
3. Submit to Prime Consultant promptly after award of Contract and prior to purchasing, the number of copies required by the contract. All drawings of a specific item or system shall be made in one submittal, and within thirty (30) days after award of Contract. Shop drawings shall be submitted on all power distribution, lighting and auxiliary systems.
4. The contractor shall fully review, comment upon and correct all shop drawings as required to assure compliance with contract documents prior to submittal to Architect. The failure of the contractor to properly review and correct shop drawings prior to submittal will result in rejection of shop drawings by the engineer. Review by the Architect will be for general conformance with contract documents. The contractor shall be fully responsible for correctness of all submitted dimensions, details, quantities and locations.

E. Site Visit:
1. The Contractor shall visit the site to determine existing dimensions and conditions affecting electrical work. Failure to do so in no way relieves Contractor of his responsibility under Contract.

F. Workmanship:
1. All work shall be in accordance with the latest editions of NFPA 70 (National Electrical Code), NFPA 101 (Life Safety Code), National Electric Safety Code, International Building Code and the rules and regulations of State and Local Authorities Having Jurisdiction.
2. All work shall be executed in a workmanlike manner and shall present a neat and mechanical appearance upon completion.
3. All items shall be installed straight and plumb in a workmanlike manner and care shall be exercised so that like items are mounted the same position, heights and general location.
4. Keep site clean of accumulation of cartons, trash and debris.

G. Safety
1. The contractor is solely responsible for all job safety. Architect assumes no responsibility for job safety. Maximum consideration shall be given to job safety and only such methods as will reasonably insure the safety of all persons shall be employed. The codes and regulations of OSHA shall be given strict compliance as well as such other codes, laws, and regulations as may be applicable.

H. Contract Documents:
1. Contract documents indicate diagrammatically, extent, general character and approximate location of work. Where work is indicated but minor details omitted, furnish and install it complete so as to perform its intended functions. For details and mechanical equipment, follow drawings provided by other disciplines (Architectural, Mechanical, Structural, Civil, etc.) and fit electrical work thereto.
2. Contract documents consist only of the hardcopy documents issued by the Prime Consultant. Electronic documents issued directly by the electrical engineer to the contractor and/or its sub-contractors/vendors are issued for convenience only (electronic documents are not formal contract documents).
3. If the contractor and/or one of its suppliers require a one-time transfer of electronic files of the current electrical construction documents to prepare shop drawings (or for another similar purpose), it shall:
   a. Sign a waiver prepared by the electrical engineer prior to the transmittal of these files.
   b. Agree to pay the electrical engineer a fee of $50.00 per drawing, up to a maximum of $400 per transfer, payable upon receipt of the files.
   c. To the fullest extent permitted by law, indemnify, hold harmless, and defend JRA from all claims, damages, losses and expenses, including attorneys' fees arising out of or resulting from the use of the CAD files.
4. Take finish dimensions at job in preference to scaled dimensions.
5. Except as above noted, make no changes in or deviations from work as shown or specified except on written order of Architect.

I. Equipment Storage
1. Store all electrical equipment in dry, covered locations as directed by equipment manufacturers. Contractor shall be responsible for replacing or repairing improperly-stored equipment as directed by Architect.

J. Installation of Equipment - General:
1. Care shall be exercised in exact routing and location of all items so as not to obstruct access to equipment, personnel walkways, or expose it to potential mechanical damage.
2. Items shall be securely anchored and/or fastened. All construction shall meet the seismic design requirements of the building code. Items (especially transformers, light fixtures, equipment racks, freestanding gear, etc.) installed in seismic zones C, D, E or F shall be supported and braced per applicable codes and standards.
3. All control cabinets, panels, motor control centers and other electrical cabinets and enclosures shall have all trash removed and be vacuumed clean. All foreign paint, etc., shall be removed from exterior and all scratches in finish touched up with same color and material as original. Any rusted areas shall be sanded, primed and repainted.

K. Circuits and Branch Circuits:
1. Outlets shall be connected to branch circuits as indicated on drawings by circuit numbers. No more outlets than are indicated shall be connected to a circuit.
2. Branch circuit homeruns shall be installed as shown on drawings. Multiple homerun conduits shall not be combined by contractor into larger, single homerun conduits unless specific permission is granted by the Engineer.

L. Lug/Terminal Ratings:
1. All lug/terminal ratings, sizes, locations, types, etc. shall be coordinated with the associated conductor sizes, types, routings, etc. by the contractor.

M. Outlet Locations:
1. Symbols shown on drawings and mounting heights indicated on drawings and in specifications are approximate only. The exact locations and mounting height must be determined on the job and it shall be the Contractor's responsibility to coordinate with other trades to insure correct installation.

N. Acceptance Testing:
1. Upon completion of work, the entire electrical system installed within this project shall be tested and shall be shown to be in perfect working condition, in accordance with the intent of the specifications and drawings. It shall be the responsibility of the Electrical Contractor to have all systems ready for operation and to have an electrician available to operate same in accordance with and under the supervision of the observation representative(s) of the Consultant. The Electrician shall be available to assist in removal of panel fronts, etc., to permit inspection as required.
2. The electrical sub-contractor shall include in bid price start-up assistance and training from a certified representative of the manufacturer for applicable systems.

O. Operations and Maintenance ("O&M") Data:
1. One set of marked "AS BUILT" drawings, three (3) sets of all equipment catalog and maintenance data and three (3) sets of all final shop drawings, on all equipment requiring same shall be turned over to owner. These items shall be bound in hard back book. Contractor shall explain and demonstrate all systems to Owner's representative.

P. Guarantee-Warranty:
1. Furnish a written Guarantee-Warranty, countersigned and guaranteed by General Contractor, stating:
   a. That all work executed under this section will be free from defects of workmanship and materials for a period of one (1) year from date of final acceptance of this work.
   b. Above parties further agree that they will, at their own expense, repair and replace all such defective work, and all other work damaged thereby, which becomes defective during the term of the Guaranty-Warranty.

Section 16060 - Grounding

A. All equipment, building steel, and main service shall be effectively and permanently grounded with a conductor cross section as required by the National Electrical Code and of capacity sufficient to insure continued effectiveness of the ground connections for fault current. Ground conductors shall be as short and straight as possible, protected from mechanical injury and, if practicable, without splice or joint.

B. All grounding connections shall be installed in accordance with the National Electrical Code and all local codes and requirements. Such codes shall be considered minimum requirements and the installation of the grounding system shall insure freedom from dangerous shock voltage exposure and provide a low impedance ground fault path to permit proper operation of overcurrent and ground fault protective devices.

Section 16075 - Electrical Identification

A. Wiring and Cabling:
1. General:
   a. Where cabling is exposed (such as within cable trays), provide two wire ties per cable (one on either end of marker plate to provide a flush installation). Where cabling is concealed (such as within pullboxes/wireways), one wire tie per cable will be acceptable.
2. Intermediate Locations:
   a. Thermal transfer labels shall be securely fastened to all wiring and cabling in the following locations:
      1) Wireways
      2) Pullboxes/Junction boxes larger than 4-11/16"
      3) Pullboxes/Junction boxes through 4-11/16" where wires and cables are not easily identifiable via the color coding and box labeling
      4) Vaults & Manholes
      5) Approximately every 50 feet within cable trays (especially at locations where cables exit or diverge). Labels within cable trays shall be grouped (rather than being pre-labeled on cables and pulled into cable trays).
      6) Other similar intermediate locations.
   b. Labels shall be stamped or printed with the following data so that the feeder or cable can be readily identified and traced:
      1) From where the circuit originates (including panel designation and circuit number):
         a) Ex: "FROM: PP-A CIR. 3 (IN MAIN ELEC ROOM)"
      2) To where the circuit extends (using the common name of the equipment):
         a) Ex: "TO: RTU-6 (ON ROOF)"
      3) The purpose of the circuit:
         a) Ex: "POWER"
      4) The set number (If parallel power feeds are used).
         a) Ex: "SET NO. 3 OF 4"
3. Circuit/Cable Termination Locations:
   a. Where multiple termination points exist within a circuit origination point (panelboard, switchboard, MCC, starter, etc.) or other similar circuit endpoint (control panel, etc.), labels shall be securely fastened to all ungrounded and neutral conductors to clearly identify the terminal and/or circuit number associated with each conductor. For example, within lighting panels, each phase and neutral conductor shall be labeled near the terminals at a clearly visible location with the associated circuit number(s), so that if all conductors were determinated, the labels would clearly indicate which conductor was associated with each circuit.

B. Electrical Distribution & Utilization Equipment:
1. General:
   a. All new and existing equipment modified by this project shall include arc-flash warning labels in accordance with NEC article 110.16.
2. All Panels, Motor Control Centers, Switchboards, Switchgear, Transformers, Etc.:
   a. Engraved nameplates identifying name of equipment, nominal voltage and phase of the equipment and where the equipment is fed from shall be installed on front surface of all panels, motor control centers, switchboards, switchgear, transformers, etc.:
      1) Ex: First Line: "NAME: RP-A", Second Line: "120/208V-3Ø-4W", Third Line: "FED FROM: PP-A CIR. 4 (IN MAIN ELEC ROOM)"
   b. Refer to Panelboard Specification Sections for additional labeling requirements (circuit directory cards, permanent circuit labels, permanent circuit numbers, etc.) required inside panelboards.

C. Safety/Disconnect Switches and Utilization Equipment (HVAC Equipment, Control Panels, Starters, Etc.)::
1. Engraved nameplates identifying equipment being fed and where the equipment is fed from shall be installed on front surface of all disconnect switches (including both visible blade type switches and toggle-type switches) and on utilization equipment (where not clearly identified by immediately adjacent local disconnect switch):
   a. Ex: First Line: "RTU-6", Second Line: "FED FROM: PP-A CIR. 5"
2. Where safety/disconnect switches are installed on the load side of variable frequency drives, the safety/disconnect switch shall be furnished with an additional engraved nameplate to read: "WARNING: TURN OFF VFD PRIOR TO OPENING THIS SWITCH".
3. Safety/Disconnect switches feeding equipment that is fed from multiple sources (such as motors with integral overtemperature contacts that are monitored via a control system) and Utilization Equipment fed from multiple sources shall be furnished with an additional BLACK-ON-YELLOW engraved nameplate to read: "WARNING: ASSOCIATED EQUIPMENT FED FROM MULTIPLE SOURCES - DISCONNECT ALL SOURCES PRIOR TO OPENING COVER".

D. Emergency Systems:
1. A sign shall be placed at the service entrance equipment indicating the type and location of on-site emergency power sources (such as generators, central battery systems, etc.) per NEC requirements.
2. All boxes and enclosures (including transfer switches, generators, power panels, junction boxes, pullboxes, etc.) dedicated for emergency circuits shall be permanently marked with white-on-red engraved nameplates so they will be readily identified as a component of an emergency circuit or system.

E. Services:
1. All Service Equipment:
   a. Engraved nameplates identifying maximum available fault current, including date the fault current calculation was performed, in accordance with NEC article 110.24.
      1) Ex: First Line: "AVAILABLE FAULT CURRENT: 16,154 AMPS", Second Line: "DATE CALCULATED: JULY 8, 2013"
2. Where a building or structure is supplied by more than one service (or any combination of branch circuits, feeders and services), a permanent plaque or directory shall be installed at each service disconnect location denoting all other services, feeders & branch circuits supplying that building or structure and the area served by each, per NEC requirements.

F. Pullboxes & Junction Boxes:
1. Engraved nameplates identifying name of pullbox/junction box shall be installed on front surface of all pullboxes & junction boxes that are named on contract documents.
2. Front covers of all concealed, non-named pullboxes and junction boxes shall be labeled with permanent black marker the circuits contained:
   a. Ex: "RP-A Cir. 1,2 & 3"

G. Services:
1. All Service Equipment:
   a. Engraved nameplates identifying maximum available fault current, including date the fault current calculation was performed, in accordance with NEC article 110.24.
      1) Ex: First Line: "AVAILABLE FAULT CURRENT: 16,154 AMPS", Second Line: "DATE CALCULATED: JULY 8, 2013"
2. Where a building or structure is supplied by more than one service (or any combination of branch circuits, feeders and services), a permanent plaque or directory shall be installed at each service disconnect location denoting all other services, feeders & branch circuits supplying that building or structure and the area served by each, per NEC requirements.

Section 16110 - Raceways

A. Raceway Type: Raceway types shall be as specified below, unless indicated otherwise on drawings:
1. Exterior, Exposed: Rigid Galvanized Steel or I.M.C. (coated with two coats of asphaltum paint where below grade or within concrete). unless otherwise noted.
2. Other Exterior (Concrete-Encased or Direct Earth Buried): Schedule 40 PVC. PVC conduit shall convert to metallic conduit (exact type as specified elsewhere within this section) prior to exiting concrete-encasement or direct earth burial. See "transition" items below for additional requirements. Conduits shall be left exposed until after Architect's observation.
3. Interior, Exposed:
   a. Hazardous Locations: Rigid Galvanized Steel.
   b. Wet Locations (including, but not limited to, Pump Rooms, Wet Wells, Underground Vaults, and other similar locations): Rigid Galvanized Steel (or Rigid Aluminum where indicated on drawings or allowed by written permission from Engineer).
   c. Dry Locations Where Subject to Mechanical Damage (including, but not limited to, below 8'-0" A.F.F. in process, shop, storage, warehouse and other similar areas): Rigid Galvanized Steel or I.M.C..
   d. Other Dry Locations: E.M.T.
4. Interior, Concealed:
   a. Embedded inside Poured Concrete Walls, Ceilings or Floors, with a minimum of 2" of concrete between finished surface and outer wall of conduit on all sides, where no anchor bolts, screws or other similar items will be installed: Schedule 40 PVC. PVC conduit shall convert to metallic conduit (exact type as specified elsewhere within this section) prior to exiting poured concrete-encasement of wall, ceiling, floor or ductbank. See below for additional requirements.
   b. Other Raceways Embedded inside Poured Concrete Walls, Ceilings or Floors (not meeting requirements above): Rigid Galvanized Steel or I.M.C. (coated with two coats of asphaltum paint where below grade or within concrete).
   c. Other Raceways: E.M.T.
5. Terminations at motors, transformers and other equipment which has moving or vibrating parts:
   a. Wet, Non-Plenum Locations: Liquidtight Flexible Metallic ("Sealtite") Conduit (shall generally not exceed 24 inches in length) with watertight fittings.
   b. Dry Locations: Flexible Metallic Conduit (shall generally not exceed 24 inches in length).
   c. Plenum Locations (such as plenum-rated areas above lay-in ceilings): Flexible Metallic Conduit (shall generally not exceed 24 inches in length).
6. Terminations at fixtures mounted in grid-type ceilings:
   a. Flexible Metallic Conduit or MC cabling (shall generally not exceed 72 inches in length and shall run from junction box to fixture, not from fixture to fixture).
7. Transition from underground or concrete-encased to exposed:
   a. Convert PVC to Rigid Galvanized Steel (coated with two (2) coats of asphaltum paint) utilizing Rigid Galvanized Steel 90 degree bends prior to exiting concrete/grade (except at outdoor pull boxes and under freestanding electrical equipment, where terminations shall be by PVC end bells installed flush with top of slab).

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NO.	DATE	REVISIONS REMARKS

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Parking Improvements
Phase I

OWNER/DEVELOPER:
Northport Housing Authority
3500 West Circle, Suite 39
Northport, AL. 35476

NORTHPORT, ALABAMA
NOVEMBER 2021

Sheet Title:
ELECTRICAL LEGEND

Date: 11/5/2021

Sheet No.:
E1 of 4

ELECTRICAL SPECIFICATIONS

B. Raceway installation
1. Follow methods which are appropriate and approved for the location and conditions involved. Where not otherwise shown, specified, or approved in a particular case, run all raceways concealed.
2. Where conduit crosses a structural expansion joint an approved conduit expansion fitting shall be installed.
3. A #10 aluminum pull wire shall be installed in all empty conduits.
4. All metallic conduit installed below grade or within concrete shall be painted with two (2) coats of asphaltum paint prior to installation.
5. Install ground wire sized per N.E.C. Table 250.122 in all conduits.
6. Conduits shall be sized in accordance with latest National Electrical Code except when size shown on drawings. However, no conduit shall be smaller than ¾-inch.
7. Exposed, field-cut threads on all metal conduits shall be painted with zinc primer (for Galvanized Rigid or I.M.C.) or urethane paint (for PVC-Coated Rigid Steel) as recommended by conduit manufacturer .

C. Routing/Locating:
1. Exposed conduit runs shall be run level and plumb and shall, on interior of buildings, be run parallel and/or at right angles to building walls and/or partitions.
2. Conduit with an external diameter larger than 1/3 the thickness of a concrete slab shall not be placed in the slab. Conduits in slab shall not be spaced closer than 3 diameters on center.
3. Conduit run in ceiling spaces shall be run as high as possible, all at same level, and shall be supported from building structure. Do not support conduit from any other installation.
4. Install conduit runs to avoid proximity to steam or hot water pipes. In no place shall a conduit be run within 6" of such pipes except where crossing is unavoidable, then conduit shall be kept at least 3" from the covering of the pipe crossed.
5. Before installing raceways for motors, HVAC equipment and other fixed equipment, check location of all equipment connections/terminal boxes with equipment supplier and locate and arrange raceways appropriately.
6. A minimum of 12" of clearance shall be provided between the finished lines of exterior, underground conduit runs and exterior, underground utilities (gas, water, sewer, etc.).

D. Bends:
1. Do not make bends (in any raceway, including flexible conduits) that exceed allowable conductor bending radius of cable to be installed or that significantly restrict conductor flexibility.
2. All bends within concrete-encased ductbanks installed in exterior locations shall be long radius bends (24" minimum bending radius - varies with conduit diameter).
3. Where numerous exposed bends or grouped together, all bends shall be parallel, with same center and shall be similar in appearance
4. All PVC elbows, bends, etc., shall be either factory bends or made with an approved heat bender.

E. Support:
1. Anchor conduit securely in place by means of approved conduit clamps, hangers, supports and fastenings. Arrangement and methods of fastening all conduits shall be subject to Engineer's direction and approval. All conduits shall be rigidly supported (wire supports may not be used in any location). Use only approved clamps on exposed conduit.

F. Terminations:
1. All conduit connections to sheet metal cabinets or enclosures located in exterior or wet locations shall terminate by use of rain tight hubs.
2. Where rigid or I.M.C. conduits enter sheet metal boxes, they shall be secured by approved lock nuts and bushings.
3. Where metal conduits enter outdoor pull boxes, manholes, under freestanding electrical equipment or other locations where direct metal-to-metal contact does not exist between enclosure and conduit, grounding bushings shall be installed. Each grounding bushing shall be connected to the enclosure ground and all other grounding bushings with properly sized grounding conductors.
4. Where E.M.T. enters sheet metal boxes they shall be secured in place with approved insulating fittings.
5. Where PVC enters outdoor pull boxes, manholes or under freestanding electrical equipment, PVC end bells shall be installed.
6. Conduit ends shall be carefully plugged during construction.
7. Permanent, removable caps or plugs shall be installed on each end of all empty raceways with fittings listed to prevent water and other foreign matter from entering the conduit system.

G. Penetrations:
1. All fire barrier penetrations shall be made in accordance with a U.L. listed assembly. Refer to drawings and other specifications for additional requirements.
2. All penetrations shall be at right angles unless shown otherwise.
3. Structural members (including footings and beams) shall not be notched or penetrated for the installation of electrical raceways unless noted otherwise without specific approval of the structural engineer.
4. Dry-packed non-shrink grout or watertight seal devices shall be used to seal openings around conduits at all penetrations through concrete walls, ceilings or aboveground floors.
5. All raceways entering structures shall be sealed (at the first box or outlet) with polyurethane grout compound that expands to form a flexible foam seal that prevents the entrance of gases or liquids from one area to another (Prime Resins Prime-Flex or equal).
6. All raceways passing through walls of rooms containing/storing noxious chemicals (chlorine, ammonia, etc.) or through hazardous locations shall be sealed with conduit seals (Crouse-Hinds type EYS or equal).
7. All raceways terminating into electrical enclosures/devices/panels/etc. located in hazardous locations shall be sealed with conduit seals (Crouse-Hinds type EYS or equal) within 18" of the termination.

H. Underground electrical raceways shall be installed to meet the minimum cover requirements listed in NEC Table 300.5. Refer to drawings for more stringent requirements.

Section 16120 - Wires and Cables

A. General: Conductors shall have current carrying capacities as per N.E.C. and with 600 volt insulation, #12 minimum except for controls and fixture wire. Conductors shall be copper.

B. General Application (see below for exceptions):
1. At or Below Grade (including within slab-on-grade):
   a. #8 or larger conductors: XHHW or RHH/RHW/USE stranded.
   b. #10 or smaller conductors for circuits terminating at motors: THHN/THWN or XHHW stranded.
   c. #10 or smaller conductors (excluding circuits terminating at motors): THHN/THWN or XHHW solid.
2. Above Grade:
   a. #8 or larger conductors: THHN/THWN stranded.
   b. #10 or smaller conductors for circuits terminating at motors: THHN/THWN stranded.
   c. #10 or smaller conductors (excluding circuits terminating at motors): THHN/THWN solid.

C. General Installation:
1. All wires and cables shall be installed in conduit unless specifically noted otherwise.
2. All joints and splices on wire shall be made with solderless connectors, and covered so that insulation is equal to conductor insulation.
3. No splices shall be pulled into conduit.
4. No conductor shall be pulled until conduit is cleaned of all foreign matter.
5. Wire and cable shall be neatly formed, bundled and tied in all panelboards, wireways, disconnect switches, pullboxes, junction boxes, cabinets and other similar electrical enclosures.
6. All wires and cables installed in underground or other wet locations shall be rated by the manufacturer for wet locations.
7. Network cabling shall be continuous from endpoint to endpoint and shall not be spliced unless specifically noted otherwise.

D. Low Voltage Cabling:
1. All low voltage wires and cables shall be installed in conduit unless specifically noted otherwise. Low voltage control and/or network cabling located within concealed, accessible ceiling spaces (such as above lay-in ceilings) may be run without conduit if the following requirements are met:
   a. Cabling shall be plenum-rated, multi-conductor.
   b. Cabling shall be supported with J-hook supports on intervals not to exceed 5'-0" on center. Cabling shall be supported solely from the j-hooks supported from the building structure, without using piping, ductwork, conduit or other items as supports.
   c. Cabling shall be properly bundled with plenum-rated Velcro straps on intervals not to exceed 30" on center.
   d. Properly-sized conduit(s) shall be provided wherever cabling enters an inaccessible or exposed area. End bushings shall be provided on both ends of all raceway terminations.

E. A color coding system shall be followed throughout the network of branch power circuits, identifying unique colors for Phase A, Phase B & Phase C, Common Neutral (Shared between phases), Neutral A, Neutral B, Neutral C, and Ground per NEC requirements and standard local conventions.

Section 16130 - Outlet Boxes, Junction Boxes & wireways

A. All boxes and wireways shall be of sufficient size to provide free space for all enclosed conductors per NEC requirements. Fill calculations shall be performed by contractor per NEC requirements.

B. Outlet Boxes & Junction Boxes (through 4-11/16")
1. Sheet metal boxes shall be used on concealed work in ceiling or walls and exposed work in dry, interior locations. Cast boxes shall be used on exterior or any work exposed to moisture, fumes or gases.

C. Junction & Pull Boxes (larger than 4-11/16")
1. For all below grade exterior use and elsewhere as shown:
   a. In areas subject to future vehicular traffic: shall be galvanized cast iron (rated AASHTO H-20 Loading unless noted otherwise).
   b. In areas not subject to vehicular traffic: shall be galvanized cast iron or pre-cast polymer concrete (rated for Tier 15 Loading unless noted otherwise).
2. All boxes installed exposed in exterior or wet areas shall be powder-coated galvanized steel (NEMA 3R).
3. All boxes installed exposed in corrosive areas shall be stainless steel (NEMA 4X).
4. All others shall be oil tight JIC box not less than 16 gauge.

Section 16511 - Lighting Materials and Methods

A. General
1. Lighting fixtures shall be furnished as shown on plans and specified herein. It shall specifically be the responsibility of Contractor to verify exact types ceilings, walls, etc. and recessing depth of all recessed fixtures and furnish the specific mounting trims and accessories of the specified and/or accepted fixture specifically for the ceiling, wall etc. in which each fixture is to be installed.
2. Base bid manufacturers are listed on the lighting fixture schedule. Manufacturers listed without accompanying catalog numbers are responsible for meeting the quality standards, efficiency, maximum wattages and photometric distributions set by the specified product.
3. All lighting fixtures shall be so designed and shall have ballasts, drivers and other similar items so installed as to function without interruptions or failures when operating in the environment in which they are proposed to be installed. Special attention shall be given to environments with potentially high ambient temperatures such as attic spaces, exterior soffits, confined interior soffits, coves, unconditioned spaces, etc. and shall be addressed by providing fixtures with suitable high ambient temperature ratings, remote mounting of drivers/ballasts, providing approved ventilation, etc. as directed by fixture manufacturer and approved by engineer, at contractor's expense.
4. All fixtures installed such as to create penetrations through fire rated ceiling or wall assemblies shall be labeled as suitable for that purpose or installed with covers, tenting or other means as required to maintain the fire rating of the assembly.

B. LED Luminaires
1. For the purpose of these specifications, LED Luminaires shall be defined as the entire LED fixture assembly including LED array, drivers, housing, electronics, etc. that compose the lighting fixture.
2. Furnish and install LED Luminaire of proper size, type, efficacy, delivered lumen output, color temperature, distribution pattern, operational life, and CRI as shown on drawings.
3. LED Luminaires shall be tested in accordance with LM-79 and LM-80 standards.
4. LED drivers shall comply with NEMA 410 standards for inrush current, etc.
5. Exterior, pole mounted LED Luminaires shall be provided with an easily-serviceable, UL recognized surge protection device that meets a minimum 10kA Category C Low operation (IECC C62.41.2-2002). Device shall be wired in front of light engine(s) and driver(s) and shall fail "open" such as to prevent fixture operation after a surge protection failure.
6. LED Luminaires shall have a guarantee-warranty of at least five years unless specifically noted otherwise on contract documents.
7. LED Luminaire assembly shall comply with ambient temperature requirements specified in General section above.

C. Ballasts
1. Unless shown otherwise on plans, all fluorescent ballasts shall be electronic type with 10% maximum harmonic distortion and shall be approved by E.T.L. and have U.L. and C.B.M. label, be high power factor and have a noise level rating in accordance with I.E.S. recommendations. Fluorescent ballasts shall conform to temperature requirement noted under fixture above.
2. All T8 and T5HO ballasts shall be programmed-start type with parallel wiring (Philips/Advance Optanium #PSP or equal by GE).
3. All HID ballasts shall be of the pulse-start super constant wattage autotransformer type (SCWA) or electronic type. Reactor-type HID ballasts are unacceptable.
4. Each ballast shall be properly protected by fusing, internal or external to the ballast assembly. Where required by the authority having jurisdiction, provide HLR/GMF fusing of proper size and rating external to each individual ballast. All fuses for fixtures mounted on steel or aluminum poles shall be mounted in handhole near fixture base. Contractor shall verify requirement with authority having jurisdiction prior to submitting shop drawings.
5. Ballasts shall comply with NEMA 410 standards for inrush current, etc.

D. Stems/Pendants
1. Hangers shall be approved ball aligner type swivel, 30 degrees from vertical with swivel below canopy.
2. Stems/Pendants shall be rigid or IMC conduit unless specified otherwise on plans. Proposed stem/pendant types shall be submitted for review prior to shipment of light fixtures from factory.
3. Stems/Pendants shall be provided as required to prevent swaying of fixtures due to HVAC system airflow or other similar occurrences.
4. Shall be painted the same color as the fixture trim unless noted otherwise.

E. The guarantee-warranty shall apply to lamps as follows:
1. Screw-in LED Lamps shall be guaranteed for one (1) full year (see LED Luminaires section above for LED luminaire warranty requirements).
2. Fluorescent and HID Lamps shall be guaranteed for one (1) full year.
3. Incandescent lamps shall be guaranteed for one (1) month.
4. All Quartz Lamps shall be guaranteed for six (6) months.
5. Guarantee shall begin from date of final acceptance.

F. Manufacturer
1. Fixtures and stems shall be manufactured as shown in fixture schedule or approved equals.
2. Ballasts/drivers shall be as manufactured by Philips/Advance, GE, Lutron, Magnatec, Motorola, EldoLED or approved equal.

Lamps shall be as manufactured by General Electric, Sylvania, Philips or approved equal.

G. Support:
1. Support of all lighting fixtures shall be responsibility of electrical contractor. All lighting fixture supports shall be installed in accordance with lighting fixture supplier's recommendations.
2. Contractor shall coordinate installation requirements for all wall-mounted fixtures (especially for wall-mounted fixtures on uneven wall surfaces, etc.) as required to assure a level/flat mounting surface and level/plumb/secure finished installation. Contractor shall provide flat mounting plates or other mounting provisions where necessary. Any proposed mounting plates, etc. shall be submitted to and approved by project architect prior to ordering materials.
3. Fixtures shall be supported independent of ceiling from structural members of building.
4. Lay-in fixtures shall be supported by four (4) taut 12 gauge hanger wires connected from each corner of the fixture to the structure above so that fixture is supported independent of the ceiling.
5. Other recessed light fixtures (including recessed downlights) shall be supported with two (2) taut 12 gauge hanger wires connected from opposing corners of the light fixture to the structure above so that fixture is supported independent of the ceiling.
6. Pendant mounted fixtures shall be directly supported from the structure above using a 9 gauge hanger wire or an approved alternate support without using the ceiling suspension system for direct support.
7. Tandem fixtures may utilize common hanger wires.
8. All lay-in fixtures shall be attached to ceiling grid by means of approved clips and in accordance with the N.E.C.
9. Contractor shall submit typical hanging detail to Engineer before installing any fixtures.

H. Connections:
1. All grid fixtures shall be wired by flex individually to junction and not wired fixture to fixture.
2. All flex shall contain 3 conductors (3rd wire ground). Ground wire shall be securely grounded at each end. Other conductors shall be connected by approved connectors.

I. Row-Mounted fixtures:
1. All stems on row-mounted fluorescent fixtures shall be installed as follows (except fixtures with slide grip hangers):
   a. One stem shall be installed in the first fixture knockout from end of row (on the first and last fixture of the row).
   b. One stem shall be installed between each two fixtures. Stem shall center joint where fixtures join and shall attach by use of "joining plates".
2. All fixtures in continuous rows other than recessed grid type shall be connected by nipples with locknuts bushings.

J. Coordination:
1. Contractor shall coordinate all dimensions & locations of light fixtures prior to rough-in to insure proper fit and coordination with other trades.
2. Contractor shall verify exact ceiling types being installed and shall adjust fixture trim types accordingly (prior to submitting light fixture shop drawings).

K. Spare Lamps
1. Turn over to Owner a minimum of one of each type lamp used. In addition, turn over to Owner one spare lamp for each ten (10) or major factors thereof used, up to a maximum of 20 for any one type and size.

REVISIONS

NO.	DATE	REMARKS

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Parking Improvements
Phase I

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NORTHPORT, ALABAMA
NOVEMBER 2021

Sheet Title:
ELECTRICAL SPECIFICATION
Date: 11/5/2021

Sheet No.:
E2 of 4

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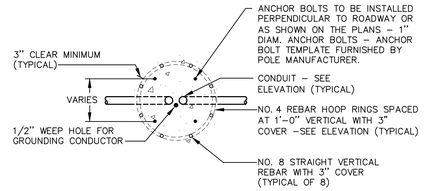
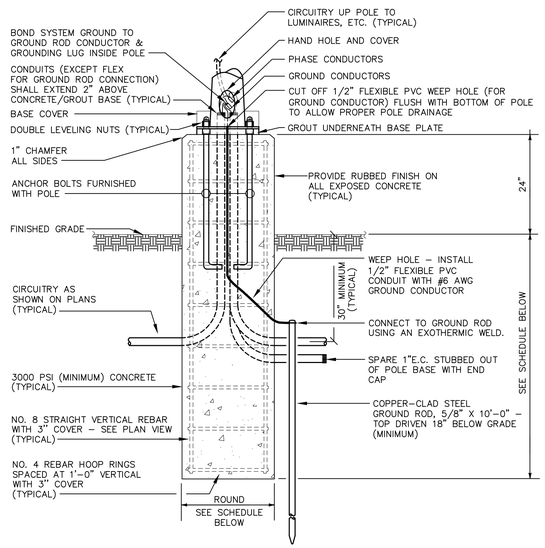


PLAN VIEW



ELEVATION

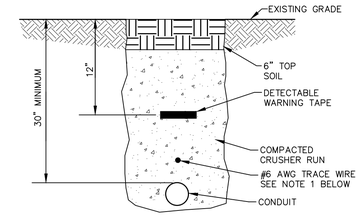
DETAIL "E–LP1" EXPOSED LIGHT POLE BASE

A / E3

SCALE : NONE

DETAIL NOTES
1. THIS CONTRACTOR SHALL CONFIRM SOIL CONDITIONS PRIOR TO BID OR INSTALLATION AND PROVIDE REINFORCEMENTS AS MAY BE REQUIRED TO SUPPORT POLES & LUMINAIRES.
2. MINIMUM POLE BASE DIAMETER SHALL BE THE GREATER OF THE FOLLOWING: A. ANCHOR BOLT CIRCLE DIAMETER PLUS 8" (TO PROVIDE MINIMUM 4" COVER OVER ALL ANCHOR BOLTS). B. 24" DIAMETER. C. DIAMETER AS REQUIRED BY SOIL CONDITIONS OR BY POLE SUPPLIER.
3. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL UNDERGROUND AND OVERHEAD UTILITIES OR OBSTRUCTIONS TO AVOID CONFLICTS PRIOR TO INSTALLATION OF LIGHT POLE BASE(S).

POLE BASE DIMENSIONS				
POLE HEIGHT	MINIMIMUM BASE DEPTH (BELOW GRADE) (SEE NOTE 1 ABOVE)			BASE DIAMETER
	CLAYEY SOILS (CL, ML, CH, MH)	SANDY SOILS (SW, SP, SM, SC, GM, GC)	GRAVELY SOILS (GW, GP)	
31 – 35 FT.	9'–0"	7'–6"	7'–0"	SEE NOTE 2 ABOVE

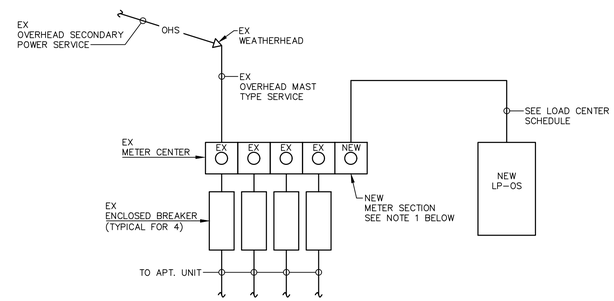


TYPICAL TRENCH DETAIL LESS THAN 12" WIDE

B / E3

SCALE : NONE

DETAIL NOTES
1. REFER TO CIVIL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION ON TRENCHING REQUIREMENTS.



SINGLE LINE DIAGRAM

SCALE : NONE

NOTES
1. FURNISH ALL MATERIAL AND LABOR REQUIRED TO ADD NEW METER SECTION AND METER TO EXISTING METER CENTER. COORDINATE ALL REQUIREMENTS WITH ALABAMA POWER COMPANY PRIOR TO BID AND INCLUDE ALL COSTS IN BID PRICE. SEE GENERAL ELECTRICAL NOTE 1.

LOAD CENTER SCHEDULE - LP-OS

PANEL TYPE:	SQUARE 'D' TYPE QO LOAD CENTER	AIC RATING:	10KAIC (MINIMUM)
VOLTAGE	120/240V-1P-3W	MOUNTING:	SURFACE
AMPS & TYPE:	100/2 MAIN BKR	LOCATION:	EXTERIOR WALL
FED FROM:	UTILITY	FEEDER:	3#3 - 1 1/4"C

CKT. NO.	NOTES	BKR	DESCRIPTION	WATTS	PHASE	WATTS	DESCRIPTION	BKR	NOTES	CKT NO.
1	NOTE 3	20/2	PARKING AREA LIGHTING	500	A		SPACE	20/1	-	7
2	-			500	B		SPACE	20/1	-	8
3	-	20/1	SPARE		A		SPACE	20/1	-	9
4	-	20/1	SPARE		B		SPACE	20/1	-	10
5	-	20/1	SPARE		A		SPACE	20/1	-	11
6	-	20/1	SPACE		B		SPACE	20/1	-	12

NOTES:	PH. A:	PH. B:			
1. PANEL SHALL BE SERVICE-ENTRANCE RATED.	500	500		TOTAL CONNECTED LOAD:	1.0 KVA
2. ENCLOSURE SHALL BE NEMA 3R.					4.3 AMPS
3. ROUTE THRU TIME SWITCH.				TOTAL DEMAND LOAD:	1.0 KVA
					4.3 AMPS
				TOTAL COMPUTED LOAD:	1.3 KVA
					5.4 AMPS

LIGHTING FIXTURE SCHEDULE

MARK	MANUFACTURER	CATALOG NUMBER	VOLTAGE	LAMPS WATTS	LAMPS LUMENS	LAMPS TYPE	MOUNTING HEIGHT	MOUNTING TYPE	REMARKS
Y	LITHONIA KIM GARDCO	DSX2LED-P1-40K-T3M-MVOLT	240	140	18,964	LED	SEE DETAIL "E-PL1" OF 30'-0" ROUND TAPERED STEEL POLE W/6" BASE COVER	WITH LITHONIA RTS30-B-	FSA

LIGHTING FIXTURE SCHEDULE GENERAL NOTES:

LIGHTING FIXTURE SCHEDULE KEYED NOTES:

FSA PROVIDE FINISH AS SELECTED BY ARCHITECT.

JACKSON, RENFRO & ASSOCIATES, INC.
ELECTRICAL ENGINEERING & DESIGN
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JRA JOB NO. 221181

REVISIONS		
NO.	DATE	REMARKS

ALABAMA LICENSED No. 19002 PROFESSIONAL ENGINEER TIMOTHY C. COOKE
11–04–2021

YELLOWHAMMER ENGINEERING
PO Box 20603
Tuscaloosa, AL. 35402
Phone 205.764.7593
www.yellowhammereng.com

Parking Improvements
Phase I

OWNER/DEVELOPER:
Northport Housing Authority
3500 West Circle, Suite 39
Northport, AL. 35476

NORTHPORT, ALABAMA
NOVEMBER 2021

Sheet Title:
ELECTRICAL SCHEDULES
Date: 11/5/2021

Sheet No.:
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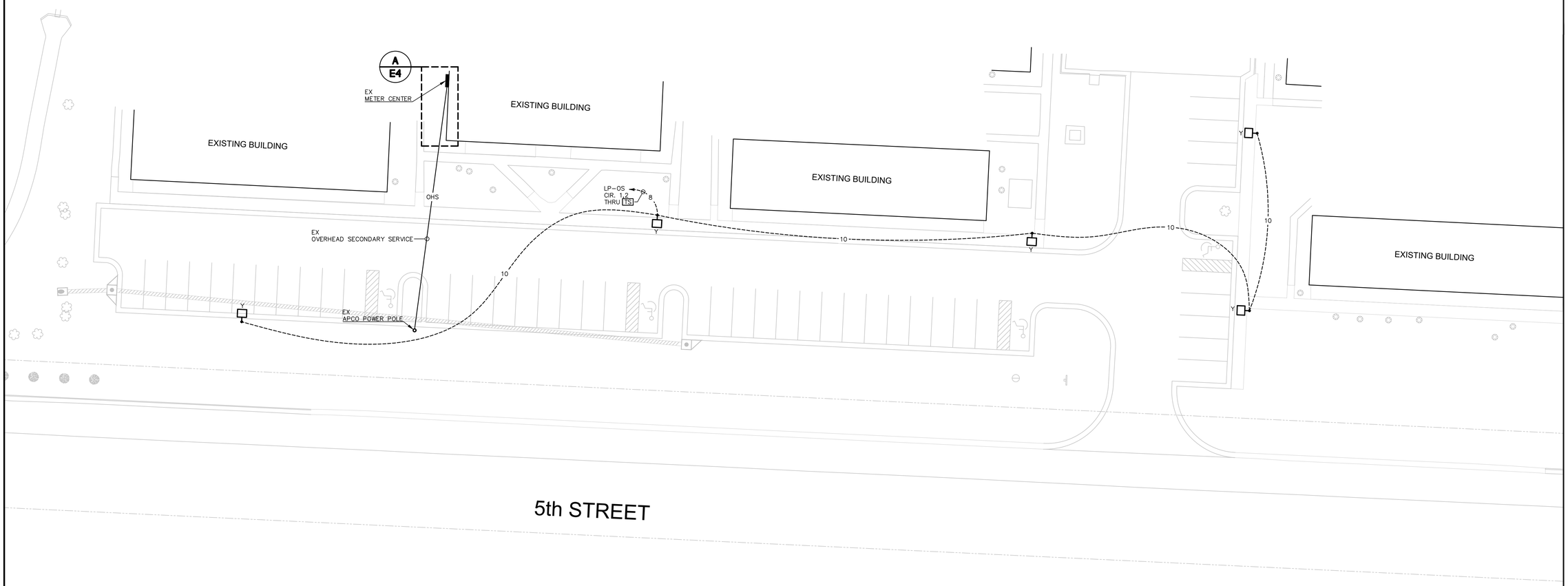
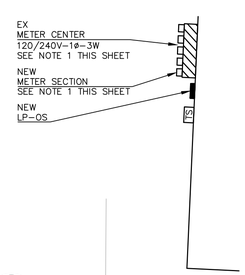


NORTH

ELECTRICAL SITE PLAN

SCALE : 1"=20'-0"

NOTES THIS SHEET ONLY
1. FURNISH ALL MATERIALS AND LABOR REQUIRED TO EXTEND EXISTING METER CENTER AS NECESSARY TO ADD NEW METER SECTION FOR NEW OWNER'S SERVICE.



NORTH

A E4

LARGE SCALE PLAN

SCALE : 1/8"=1'-0"

REVISIONS

NO.	DATE	REMARKS

ALABAMA LICENSED No. 19002 PROFESSIONAL ENGINEER TIMOTHY C. COOKE

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Sheet Title:
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Date: 11/5/2021

Sheet No.:
E4 of 4

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