SPECIAL PROVISIONS

FOR

<Project Name>

At The

[AIRPORT] AIRPORT

In the City of Los Angeles, California

Date

BY WAY OF EXPLANATION

This set of standard specifications for Los Angeles World Airports (LAWA) construction projects is the first edition of its kind to standardize the specifications for LAX, Ontario and Van Nuys Airports.

This set of specifications has been devised from previous projects at LAX that were successfully completed during the years of 2002-2010 at LAX. It also includes significant updates that were a result of experiences that occurred during construction projects.

This is meant to be a document to provide guidance for future LAWA projects, but there are many decisions in the specifications that will need to be made by the Engineer-of-Record for each project. Each design team shall complete a thorough review of the specifications and make decisions as required by the specific conditions of each project, especially as indicated by the [WORDS IN BOLD BRACKETS].

TECHNICAL PROVISIONS

These specifications modify the provisions in the "Greenbook" Standard Specifications for Public Works Construction (SSPWC, 2009 edition including Supplements as amended by the City of Los Angeles Department of Public Works "Brown Book"). Subsections that appear in these specifications have been modified from the SSPWC. If a Subsection of the SSPWC is not modified in these specifications, it is considered to apply under the Contract as written in the SSPWC.

TABLE OF CONTENTS

I. General

II. Pavement / Earthwork

III. DRAINAGE / UTILITIES / MISC

IV. PAINTING / FENCING / SEEDING /MISC

V. ELECTRICAL / MISC

VI. APPENDICES

END OF TABLE OF CONTENTS

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Aircraft Terminal Parking Position Striping Design Checklist

Before Beginning Design of a Striping Plan:

- ❑ Obtain existing as-built striping plan.
- ❑ Request survey of taxilane and ramp area. Survey to include curbs, building lines, utilities, fuel pits, power pit, all obstructions. Survey to include verification of existing striping, lead in and nose marks.
- ❑ Acquire all Ground Service Equipment (GSE) Operation information.
- ❑ Conduct a site walk with the existing plans and survey in hand and verify location of all ground obstructions, such as: sidewalks, vehicle parking areas, equipment installations not shown on plans.
- ❑ Meet with Airport Operations, Terminal Operations, and Airlines and inquire about any special needs concerning aircraft parking / operations. Determine aircraft mix.
- ❑ Will planes be able to power in/out? Consider arrival and departure procedures. Pushback procedures from the departure gate and surrounding gates should be taken into account.
- ❑ Consider jet blast effects.
- ❑ Maintain minimum 15' clearance between wingtips.
- ❑ Determine if operational restrictions at adjacent gates are acceptable. (Example of an Operational restriction: "May park a 737-700W (winglet) at Gate 13, only when a 737-300 or smaller aircraft is at Gate 14").

Special Considerations – Passenger Boarding Bridges, (PBB):

- ❑ Determine minimum/maximum PBB extension radius (measured from center of column to center of cab).
- ❑ Determine angle of operation limits (this is set by the PBB maintenance crew by limit switches).
- ❑ Determine if sections can be added (or removed) to PBB's.
- ❑ Provide striping to ensure proper clearances for bridge attachments, such as stairs, baggage chutes. Consider painted wheel squares.
- ❑ Provide at least seven (7) foot clearance from aircraft fuselage side for PBB parking and maneuvering to aircraft – speak with PBB operators / maintenance to confirm this is adequate for their operation.

Special Considerations – ARFF Equipment - Ground Service Equipment:

- ❑ Provide enough clearance for Aircraft Rescue and Fire Fighting (ARFF) equipment.
- ❑ Verify and provide enough clear room in front of aircraft for towing/tug equipment to operate – (tow trucks can be long: (30') + tow bar (10') = 40' minimum clearance from nose wheel of aircraft).
- ❑ Provide adequate space surrounding aircraft for GSE and catering trucks to maneuver, and to service aircraft– note where sidewalks and other obstructions on ramp may hinder this. Consider the proximity to the next gate, and it's service equipment.

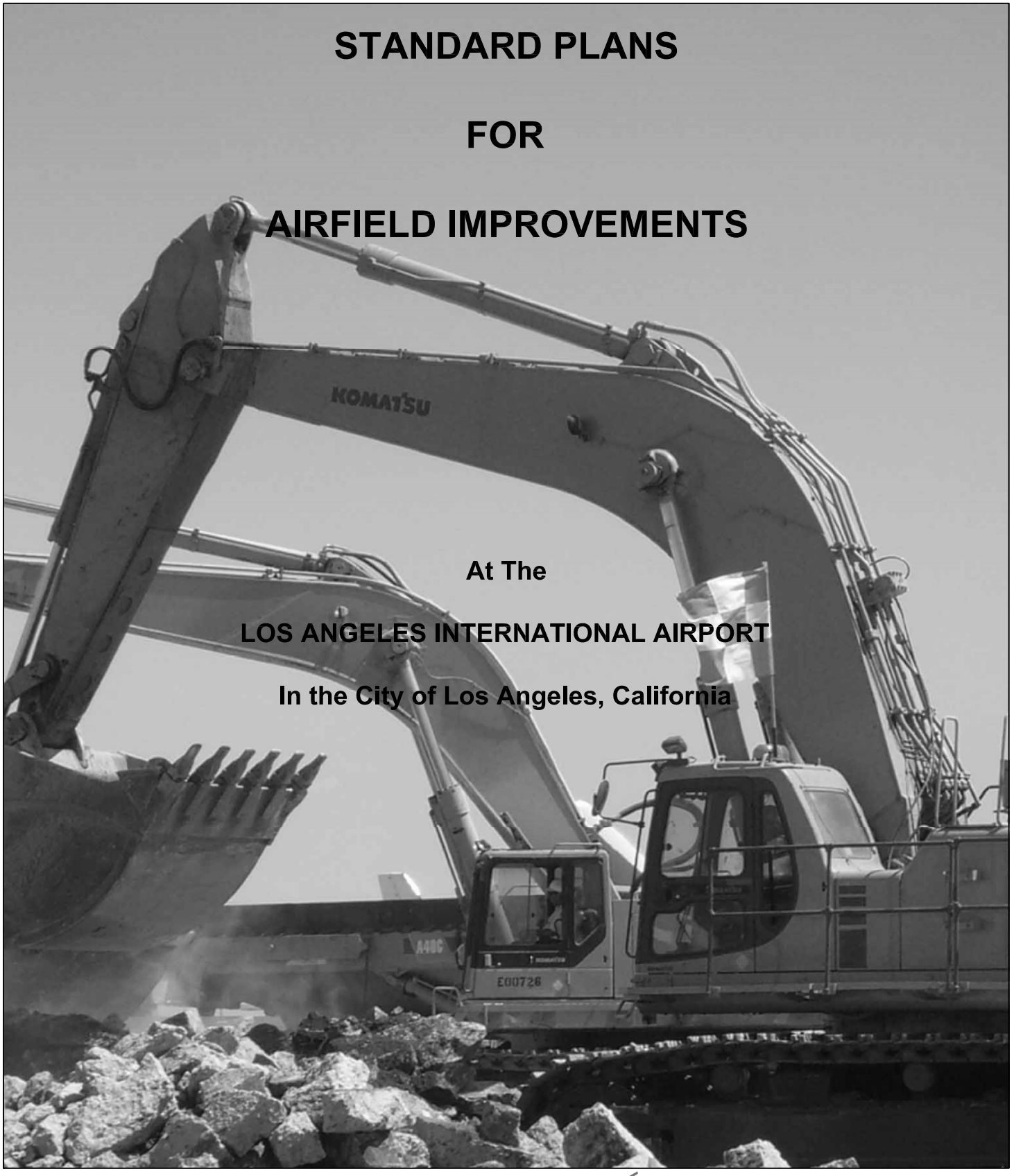
Before Commencement of Painting/Striping:

- ❑ Discuss with LAWA Operations/Terminal Operations, the recommended order each Gate is to be painted – it may be best to paint Gates in sequence since any change in the striping plan will have a domino effect on the rest of the Gates (may be more complicated if Gates are restriped randomly).
- ❑ Once Survey has marked out new striping / parking lines, and before new striping is painted: Airport Operations or Terminal Operations staff, in conjunction with PBB maintenance/operator should test aircraft for clearances for tugs, ground service equipment, and any stress to PBB pre-set limits (may need adjustment).

STANDARD PLANS

FOR

AIRFIELD IMPROVEMENTS



At The

LOS ANGELES INTERNATIONAL AIRPORT

In the City of Los Angeles, California

REVISION NO.	DESCRIPTION	DATE

APPROVED BY: LAWA STAFF
CHECKED BY: ANTONE FERMELIA
DRAWN BY: WILLIAM P. MAREK
DATE: 10-11-2011

HNTB

DRAFT SUBMITTAL

LAWA STANDARD PLANS

COVER SHEET

LAWA STANDARD PLAN NUMBER

00.00

SHEET: 1 OF 26

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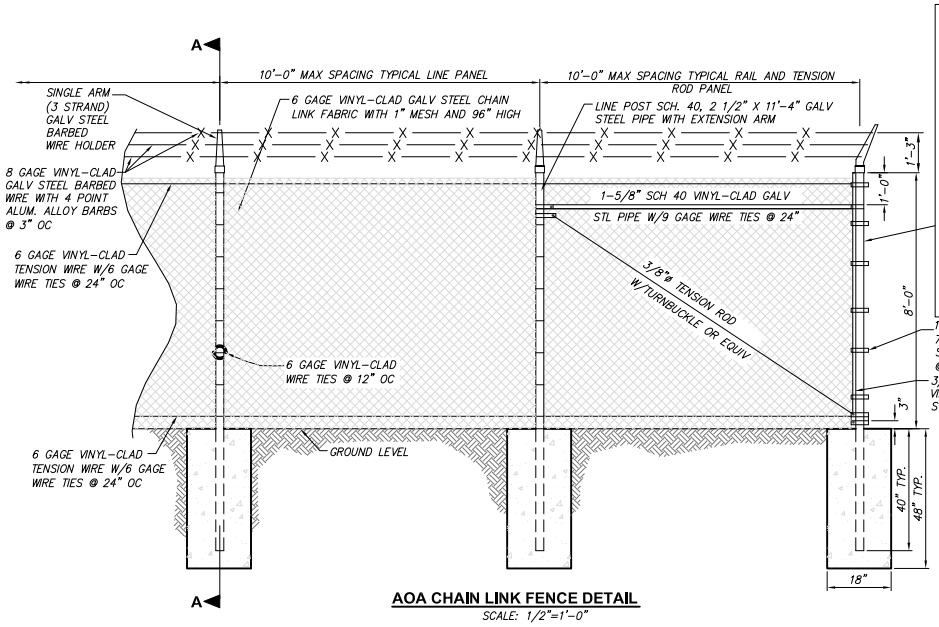
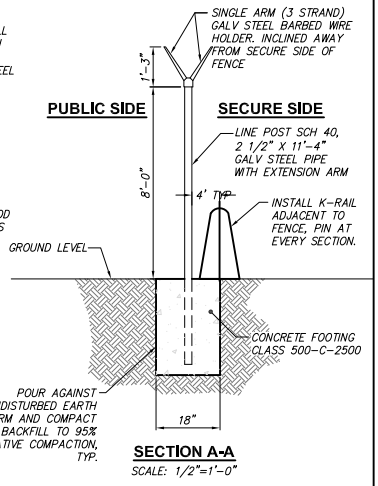
Sheet List Table	
PLAN NO.	**TITLE**
1	COVER SHEET
2	TABLE OF CONTENTS
3	AOA FENCING
4	FENCE
5	BARRICADE DETAILS
6	TEMPORARY BLOCKING PLATES
7	F.O.D. PROTECTION
8	EROSION CONTROL
9	EXISTING UTILITY PROTECTION 1
10	EXISTING UTILITY PROTECTION 2
11	PAVEMENT JOINT DETAILS – 1
12	PAVEMENT JOINT DETAILS – 2
13	PAVEMENT SECTIONS
14	GRADING AND DRAINAGE DETAILS 1
15	GRADING AND DRAINAGE DETAILS 2
16	RUNWAY MARKING
17	TAXIWAY CENTERLINE MARKING
18	SURFACE PAINTED SIGNS
19	AIRCRAFT HOLD MARKING
20	SERVICE ROAD MARKING
21	SURFACE PAINTED SIGN STENCIL 1
22	SURFACE PAINTED SIGN STENCIL 2
23	TEMPORARY ELECTRICAL
24	BASE CAN INSTALLATION IN PROPOSED PCC PAVEMENT
25	BASE CAN INSTALLATION IN PROPOSED PCC PAVEMENT
26	TAXIWAY AND GUARD LIGHT INSTALLATION DETAILS

GENERAL NOTES - FENCE DETAIL

1. ALL SIZES AND GAUGES FOR PIPE POSTS, RODS, AND WIRES ARE OUTSIDE DIAMETERS WHICH INCLUDES THE VINYL COATING THICKNESS.
2. ALL FENCE MATERIAL AND FITTINGS SHALL BE OF HIGH GRADE DOMESTIC QUALITY STEEL, AND SHALL BEAR MARKINGS AS BEING SUCH.
3. THE CHAIN LINK FABRIC SHALL BE PLACED ON THE OUTWARD FACE OF THE POSTS, STRETCHED TAUT AND SECURELY FASTENED.
4. ALL EXPOSED METALS, SUCH AS NUTS AND BOLTS AND WELDED AREAS SHALL BE PAINTED WITH COLOR TO MATCH THE FENCE SYSTEM.
5. ALL NON VINYL-CLAD CHAIN LINK FENCE MATERIAL AND FITTINGS SHALL CONFORM TO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SECTION 206-6 UNLESS OTHERWISE SPECIFIED.
6. CONCRETE FOR CHAIN LINK FENCE POST FOOTINGS SHALL BE CLASS 500-C-2500.



AOA CHAIN LINK FENCE DETAIL
SCALE: 1/2"=1'-0"



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

REVISION NO.	DESCRIPTION	DATE

APPROVED BY: LAWA STAFF
CHECKED BY: ANTONE FERMELIA
DRAWN BY: WILLIAM P. MAREK
DATE: 10-11-2011

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LAWA STANDARD PLANS

AOA FENCING

LAWA STANDARD PLAN NUMBER
01.01
SHEET: 3 OF 26

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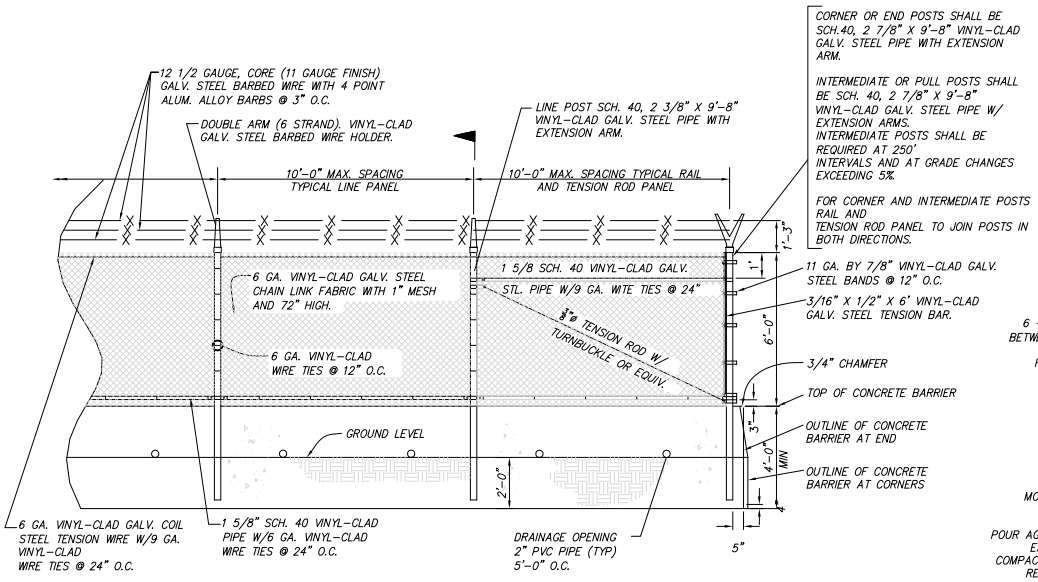
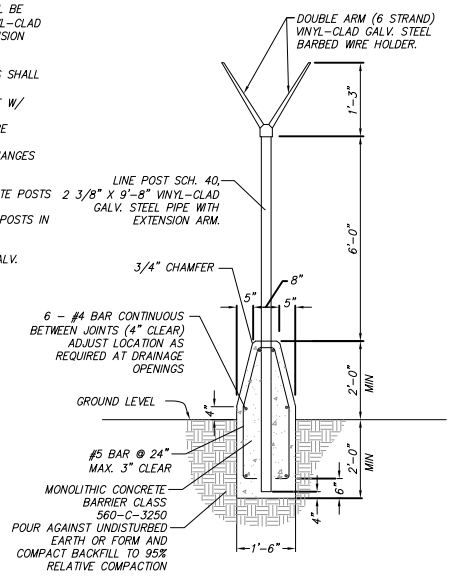
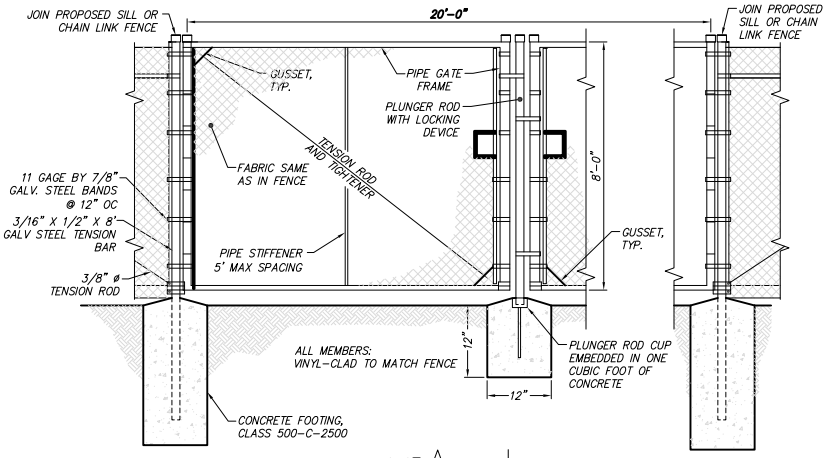
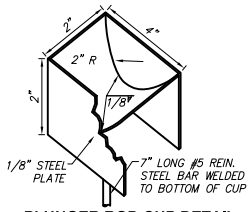


BARRIER FENCE DETAIL

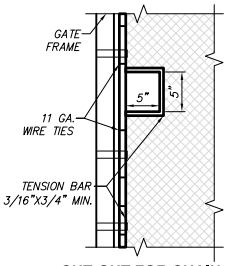


SECTION - POLE FOUNDATION

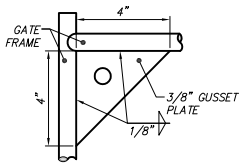




PLUNGER ROD CUP DETAIL

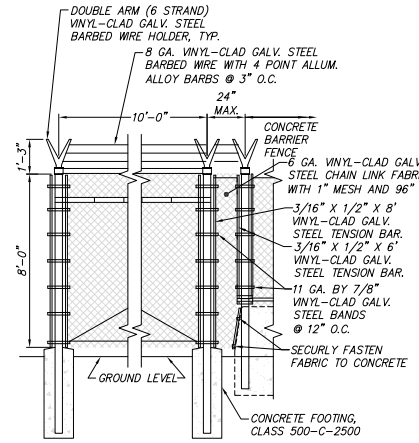


CUT-OUT FOR CHAIN AND LOCK DETAIL



GUSSET DETAIL

SWING GATE DETAIL



CHAIN LINK TO BARRIER TIE-IN DETAIL

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APPROVED BY: LAWA STAFF
CHECKED BY: ANTONE FERMELIA
DRAWN BY: WILLIAM P. MAREK
DATE: 10-11-2011

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LAWA STANDARD PLANS

FENCE

LAWA STANDARD PLAN NUMBER **01.02**

SHEET: 4 OF 26

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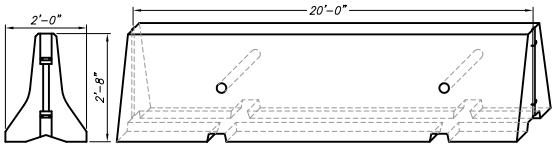
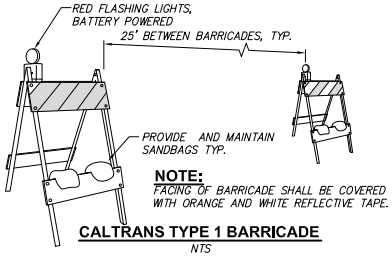


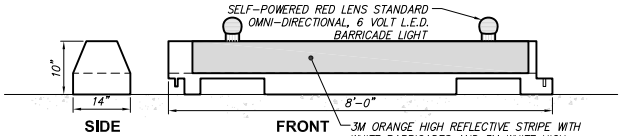
K-RAIL BARRICADE
NTS

NOTE:
1. SEE "CALTRANS 2006 STANDARD PLAN T3" FOR K-RAIL DETAIL OR APPROVED EQUAL.
2. K-RAIL SHALL BE PLACED AND PINNED END TO END.



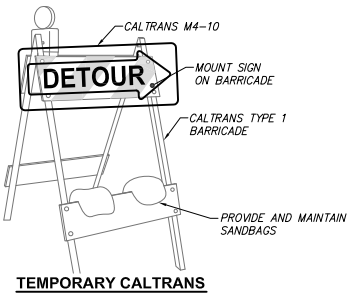
NOTE:
FACING OF BARRICADE SHALL BE COVERED WITH ORANGE AND WHITE REFLECTIVE TAPE.

CALTRANS TYPE 1 BARRICADE
NTS



LOW-PROFILE BARRICADE
NTS

BARRICADE NOTES:
1. USE RED LIGHTS, STEADY-BURN MEETING THE LUMINANCE REQUIREMENTS OF THE CALIFORNIA HIGHWAY DEPARTMENT; COLLAPSIBLE BARRICADES WITH DIAGONAL, ALTERNATING ORANGE AND WHITE AND REFLECTIVE MARKERS TO SEPARATE ALL THE CONSTRUCTION MARKED AREAS FROM AIRCRAFT MOVEMENT AREAS. ALL BARRICADES TEMPORARY AND OTHER OBJECTS PLACED AND LEFT IN THE AREAS ASSOCIATED WITH ANY OPEN RUNWAYS, TAXIWAYS, OR TAXILANES MUST BE AS LOW AS POSSIBLE TO THE GROUND; OF LOW MASS; EASILY COLLAPSIBLE UPON CONTACT WITH ANY AIRCRAFT OR ANY OF ITS COMPONETS AND STURDILY ATTACHED TO THE SURFACE TO PREVENT DISPLACEMENT FROM PROP WASH, JET BLAST, WIND VORTEX OR OTHER SURFACE WIND CURRENTS. IF AFFIXED TO THE SURFACE, THEY MUST BE FRANGIBLE AT GRADE LEVEL OR AS LOW AS POSSIBLE, BUT SHALL NOT EXCEED 3 INCHES ABOVE THE GROUND.
2. BARRICADES SHALL DELINEATE THE AREA TO BE PROTECTED AS SHOWN ON THE PHASING PLANS.
3. SPACE BARRICADES WITH A GAP OF 8' MAX END TO END.
4. CONTRACTOR SHALL USE BARRICADES IN ACCORDANCE WITH FAA AC 150/5340-1H AND 150/5370-2E. CONSTRUCTED OF HIGH IMPACT, UV-RESISTANT POLYETHYENE, WATER FILLED TYPE, AS MANUFACTURED BY OFF THE WALL (TYPE MULT-BARRIER MODEL 10"x96") OR SIMILAR APPROVED EQUAL.
5. BARRICADES AND LIGHTS SHALL BECOME LAWA PROPERTY AT COMPLETION OF PROJECT.



TEMPORARY CALTRANS M4-10 DETOUR SIGN
NTS

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REVISION NO.	DESCRIPTION	DATE

APPROVED BY: LAWA STAFF
CHECKED BY: ANTONE FERMELIA
DRAWN BY: WILLIAM P. MAREK
DATE: 10-11-2011

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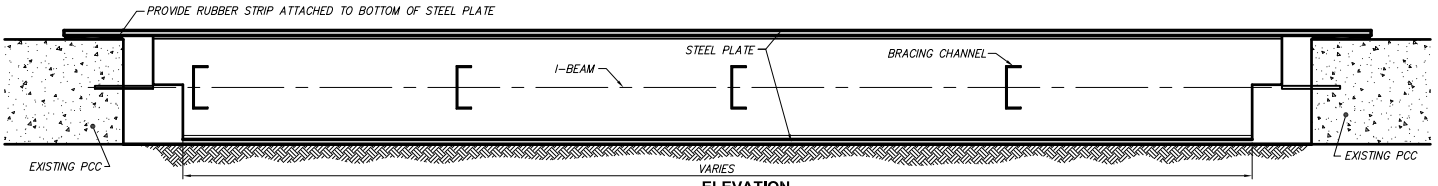
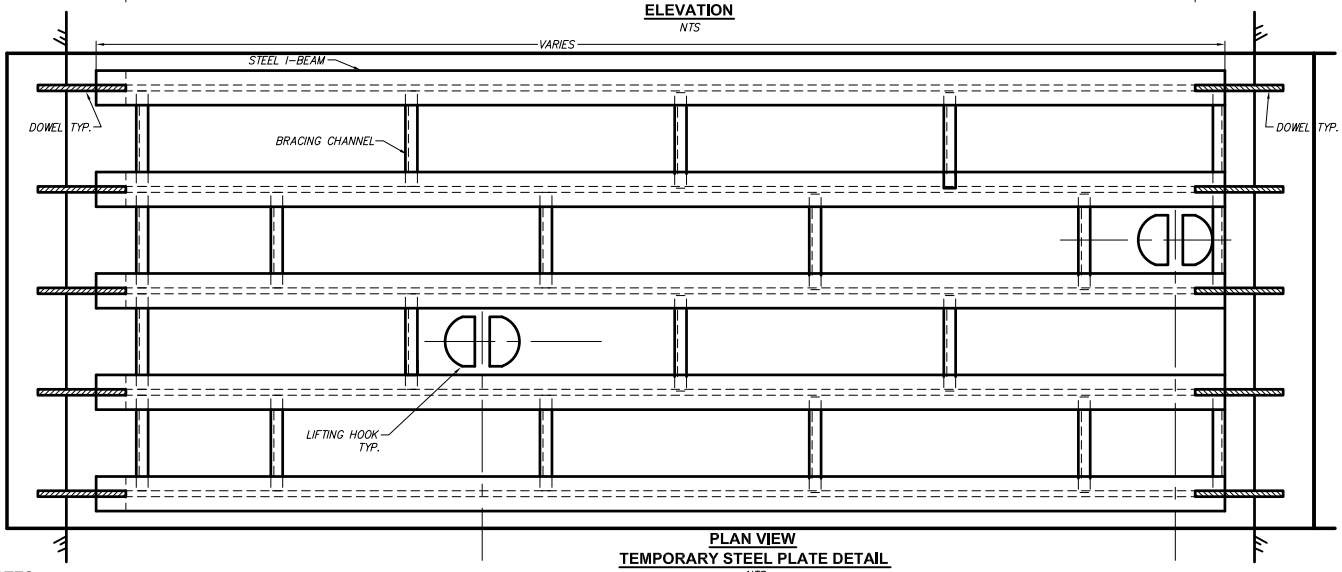
LAWA STANDARD PLANS

BARRICADE DETAILS

LAWA STANDARD PLAN NUMBER
01.03
SHEET: 5 OF 26



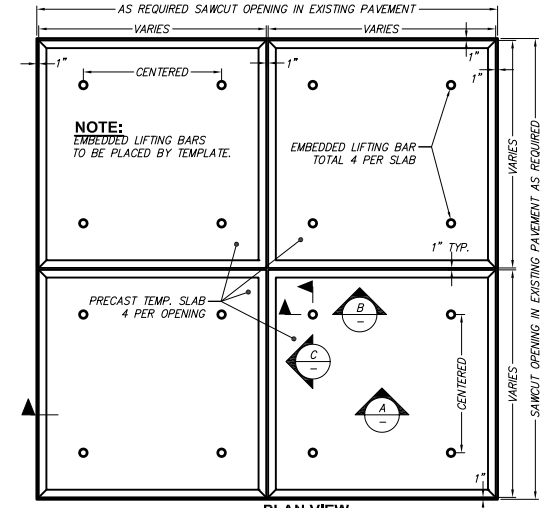
ELEVATION
NTS



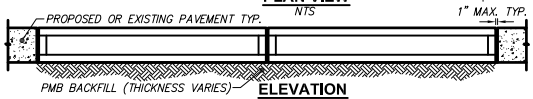
PLAN VIEW
TEMPORARY STEEL PLATE DETAIL
NTS

NOTES:

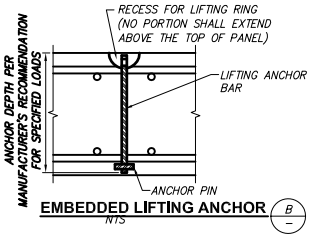
1. EXISTING SLAB DIMENSIONS AND SHAPE VARY. EXISTING SLABS SHALL BE SAW CUT AND THE SLAB REPLACEMENT SEQUENCED TO ACCOMMODATE TEMPORARY PANELS WHILE STILL PROVIDING A USABLE SURFACE CAPABLE OF WITHSTANDING AIRCRAFT (ENGINEER TO DETERMINE CRITICAL AIRCRAFT) TRAFFIC AT ALL LOCATIONS. THE CONTRACTOR SHALL PROVIDE TEMPORARY PANELS OR PROPOSE OTHER MEANS OF PAVEMENT REMOVAL AND REPLACEMENT TO PROVIDE USABLE PAVEMENT FOR AIRCRAFT AND VEHICLES DURING NON-WORKING HOURS.
2. ALL STEEL SHAPES SHALL BE ASTM A36 UNLESS OTHERWISE NOTED. ALL REINFORCING BARS SHALL BE GRADE 60. WELDING SHALL CONFORM TO ANSI/AWS D1.1-90.
3. THE CONTRACTOR'S SUBMITTAL SHALL INCLUDE THE DETAILS OF PANEL FABRICATION, LIFTING ANCHORS, LIFTING DEVICES AND COUPLINGS, THE SUBMITTAL SHALL INCLUDE DESIGN CALCULATIONS PREPARED, SEALED AND SIGNED BY A CIVIL ENGINEER LICENSED IN THE STATE OF CALIFORNIA.
4. THE EMBEDDED ANCHORS AND OTHER LIFTING COMPONENTS SHALL BE DESIGNED FOR A CAPACITY OF AT LEAST FOUR TIMES THE ASSOCIATED PANEL DEAD LOAD.
5. THICKNESS OF PRECAST PANELS WILL VARY DEPENDING ON LOCATION AND/OR CONTRACTORS CONSTRUCTION METHOD.
6. THE DETAILS SHOWN ON THIS SHEET DEPICT TWO SUGGESTED TEMPORARY PANEL SYSTEMS. OTHER SYSTEMS MEETING THE REQUIREMENTS MAY BE PROPOSED BY THE CONTRACTOR. REPLACEMENT OF CONCRETE SLABS WITH NON-STANDARD DIMENSIONS ARE REQUIRED AT SOME LOCATIONS. THE CONTRACTOR SHALL PROVIDE SPECIAL PRECAST PANEL OR PROPOSE OTHER MEANS OF PAVEMENT REMOVAL AND REPLACEMENT TO KEEP PAVEMENT USABLE BY AIRCRAFT.
7. CONTRACTOR SHALL INSTALL TEMPORARY PANEL AND ADJUST AS NECESSARY TO MATCH ELEVATIONS OF THE ADJACENT SLABS. SET PANELS ON GRADE TO PREVENT ROCKING.



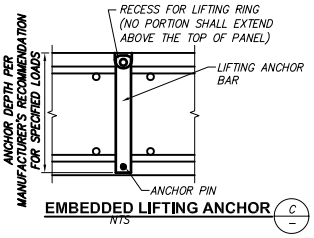
PLAN VIEW
NTS



ELEVATION
NTS



EMBEDDED LIFTING ANCHOR (B)
NTS



EMBEDDED LIFTING ANCHOR (C)
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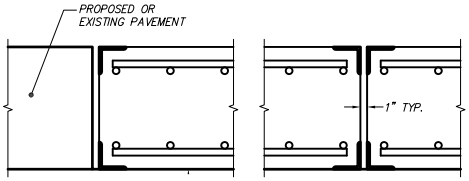
NOTE:
THICKNESS OF PRECAST PANELS WILL VARY DEPENDING ON LOCATION AND/OR CONTRACTOR'S CONSTRUCTION METHODS.



EMBEDDED LIFTING ANCHOR (A)
NTS

PRECAST TEMPORARY PANELS
NTS

REVISION NO.	DESCRIPTION	DATE

APPROVED BY:	LAWA STAFF
CHECKED BY:	ANTONE FERMELIA
DRAWN BY:	WILLIAM P. MAREK
DATE:	10-11-2011

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LAWA STANDARD PLANS

TEMPORARY BLOCKING PLATES

LAWA STANDARD PLAN NUMBER
01.04
SHEET: 6 OF 26

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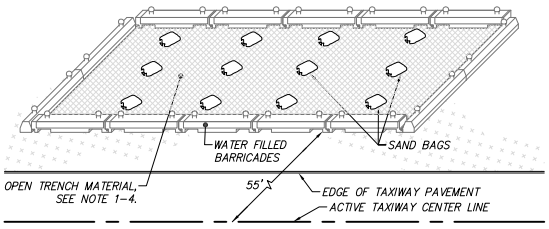
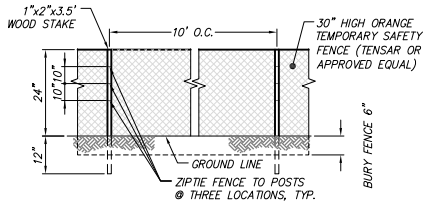


OPEN TRENCH FOD PROTECTION DETAIL

(FOR DAYTIME PROTECTION IN NIGHTTIME WORK AREAS)
NTS

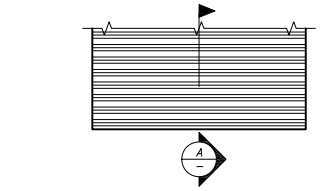
NOTES:

1. OPEN TRENCHES CREATED BY NIGHT TIME WORK WILL BE ALLOWED IN THOSE AREAS SHOWN ON THE PLANS DURING DAY TIME HOURS OUTSIDE 55' OF THE PERPENDICULAR TAXIWAY STRAIGHT SECTIONS, WITH THE FOLLOWING WORK RESTRICTIONS.
2. OPEN TRENCHES MUST BE PROTECTED WITH:
   A. ONE LAYER OF STEEL CHAIN LINK FENCING, 2" MESH
   B. SECOND LAYER SHALL BE FILTER FABRIC OR APPROVED PLASTIC CONSTRUCTION FENCING, MIN. OVERLAP 3'.
3. SANDBAGS OR WEIGHTED WATER-FILLED BARRICADE (24" MAX. HEIGHT) SHALL BE PLACED ON ALL EXPOSED EDGES INCLUDING OVERLAPS OF MATERIALS. NO EXPOSED OR NON-WEIGHTED EDGES WILL BE ALLOWED. WEIGHTS MUST PROVIDE 51.2 POUNDS OF MASS PER SQUARE FOOT OF EXPOSED FACE.
4. FOR ALL AREAS, PROVIDE INTERMEDIATE WEIGHTS TO PREVENT BILLOWING OF GEOTEXTILES, SPACING SHALL BE FIELD DETERMINED.



CONSTRUCTION SAFETY FENCE

NTS



PLAN VIEW

SECTION A

RUMBLE STRIP DETAIL

NTS

NOTES:

1. RUMBLE STRIP SHALL BE MINIMUM OF 20' LONG X WIDTH (SUFFICIENT TO COVER HAULING ROUTE)
2. IF MULTIPLE RUMBLE STRIPS ARE USED, THEY SHALL BE FASTENED TOGETHER TO PREVENT MOVEMENT.

REVISION NO.	DESCRIPTION	DATE

APPROVED BY: LAWA STAFF
CHECKED BY: ANTONE FERMELIA
DRAWN BY: WILLIAM P. MAREK
DATE: 10-11-2011

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LAWA STANDARD PLANS

F.O.D. PROTECTION

LAWA STANDARD PLAN NUMBER **01.05**

SHEET: 7 OF 26

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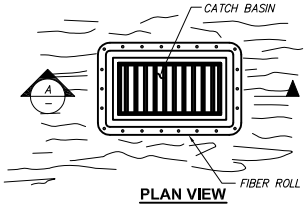
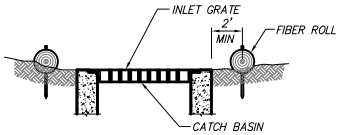


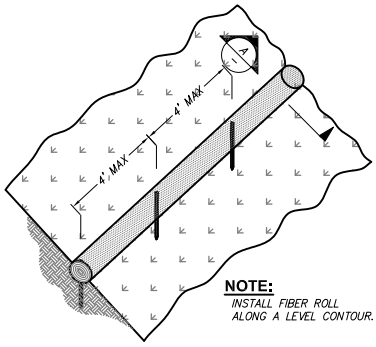
PLAN VIEW



SECTION A

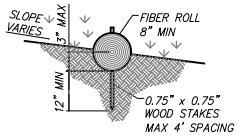
FIBER ROLL INLET SEDIMENT FILTER

NTS



NOTE:
INSTALL FIBER ROLL ALONG A LEVEL CONTOUR.

PLAN VIEW



ENTRENCHMENT SECTION A

TYPICAL FIBER ROLL INSTALLATION

NTS

REVISION NO.	DESCRIPTION	DATE

APPROVED BY: LAWA STAFF
CHECKED BY: ANTONE FERMELIA
DRAWN BY: WILLIAM P. MAREK
DATE: 10-11-2011

HNTB

DRAFT SUBMITTAL

LAWA STANDARD PLANS

EROSION CONTROL

LAWA STANDARD PLAN NUMBER
01.06
SHEET: 8 OF 26

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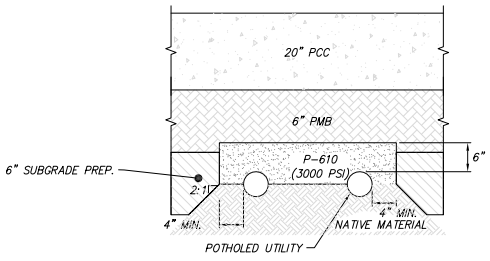


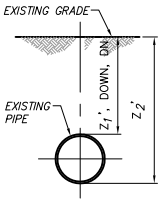
CASE A- UNDER PCC PAVEMENT

TYPE 1 PROTECTION: EXISTING UTILITY WITHIN 6" OF PMB

NTS

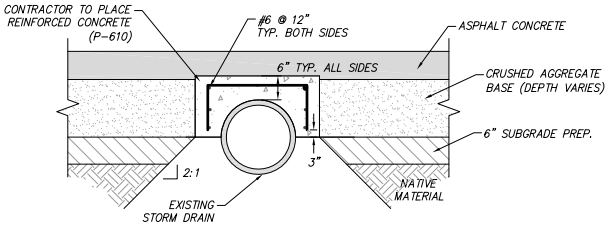
NOTE:

1. CONTRACTOR SHALL DETERMINE TYPE (CASE A OR B) TO BE USED DEPENDING ON EXISTING UTILITY DEPTH AND PROPOSED PAVEMENT SECTION.
2. WHERE EXISTING UTILITY IS WITHIN 6" OF THE PMB SECTION, UTILITY SHALL BE ENCASED WITH P-610 AS SHOWN HEREIN.



POTHOLE MEASUREMENT DETAIL

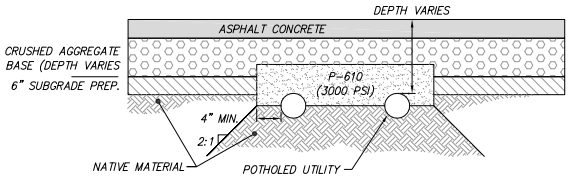
NTS



UNDER AC PAVEMENT

TYPE 2 PROTECTION: EXISTING STORM DRAIN WITHIN BASE SECTION

NTS



CASE B - UNDER AC PAVEMENT

REVISION NO.	DESCRIPTION	DATE

APPROVED BY: LAWA STAFF
CHECKED BY: ANTONE FERMELIA
DRAWN BY: WILLIAM P. MAREK
DATE: 10-11-2011

HNTB

DRAFT SUBMITTAL

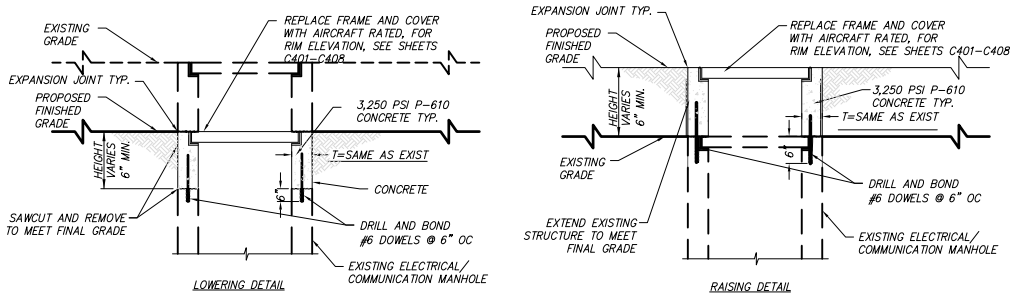
LAWA STANDARD PLANS

EXISTING UTILITY PROTECTION 1

LAWA STANDARD PLAN NUMBER **10.01**

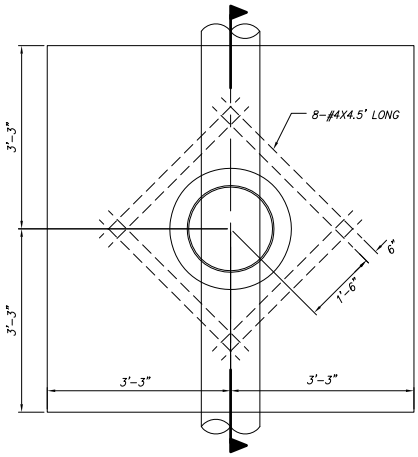
SHEET: 9 OF 26

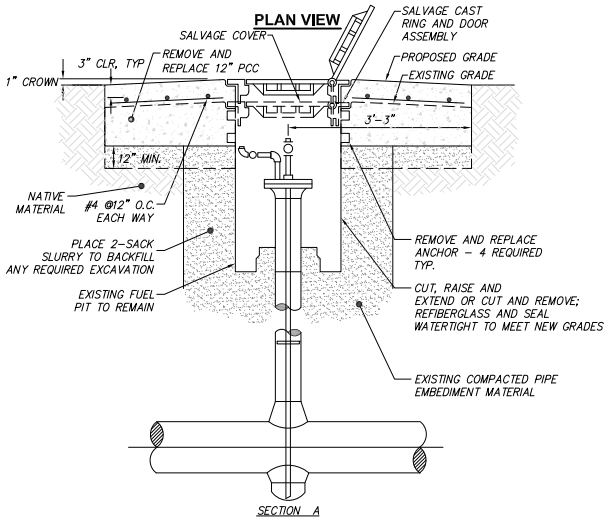
J:\46357_LAWA_APMS\00_CADD\LAX\LAWA_STD\ 10.01.dwg Oct 11, 2011 - 11:20am



ELECTRICAL / COMMUNICATION MANHOLE ADJUSTMENT DETAIL

NTS



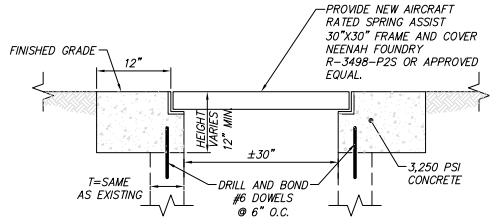


FUEL MANHOLE ADJUSTMENT DETAIL

NTS

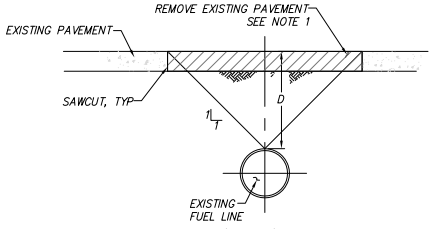
NOTES:

CONTRACTOR SHALL CONTRACT WITH DIABICO INC. OR APPROVED EQUAL FOR ALL MATERIALS AND MODIFICATIONS TO EXISTING FUEL MANHOLES.



ELECTRICAL AIRCRAFT RATED MANHOLE FRAME AND COVER REPLACEMENT DETAIL

NTS



PAVEMENT REMOVAL OVER FUEL LINE DETAIL

NTS

NOTES:

1. PAVEMENT OVER FUEL LINE AS INDICATED SHALL BE REMOVED WITH A SIDE VERTICAL LIFT. NO IMPACT EQUIPMENT SHALL BE USED.
2. CONTRACTOR SHALL POTHOLE UTILITY AND DETERMINE DEPTH 'D' PRIOR TO DEMOLITION OVER FUEL LINE.
3. IF SEVERAL FUEL LINES ARE PARALLEL, SPECIAL PAVEMENT REMOVAL INDICATED IN NOTE 1 SHALL EXTEND A DISTANCE OF D FROM OUTER MOST FUEL LINES.

REVISION NO.	DESCRIPTION	DATE

APPROVED BY:	LAWA STAFF
CHECKED BY:	ANTONE FERMELIA
DRAWN BY:	WILLIAM P. MAREK
DATE:	10-11-2011

HNTB

DRAFT SUBMITTAL

LAWA STANDARD PLANS

EXISTING UTILITY PROTECTION 2

LAWA STANDARD PLAN NUMBER **10.02**

SHEET: 10 OF 26

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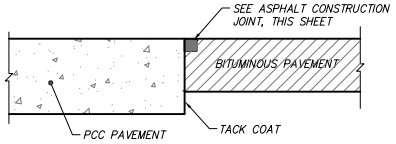
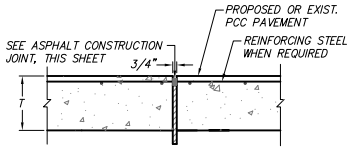


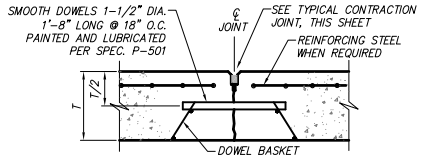
TYPE G - P.C.C. AT BITUMINOUS JOINT TREATMENT

N.T.S.



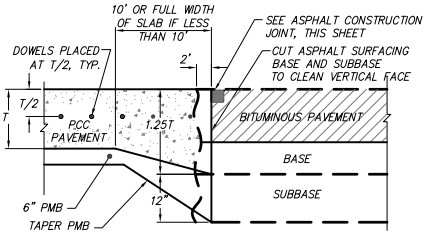
TYPE B (MODIFIED) - EXPANSION JOINT

N.T.S.



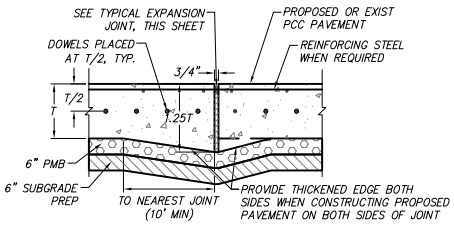
TYPE F - CONTRACTION JOINT

N.T.S.



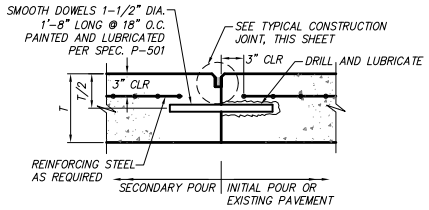
TYPE H - PCC THICKENED EDGE JOINT AT BITUMINOUS

N.T.S.



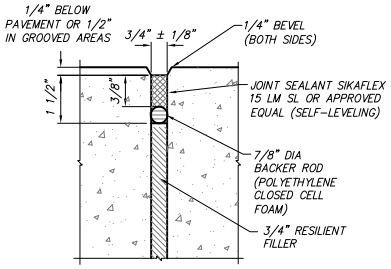
TYPE B - THICKENED EDGE EXPANSION JOINT

N.T.S.



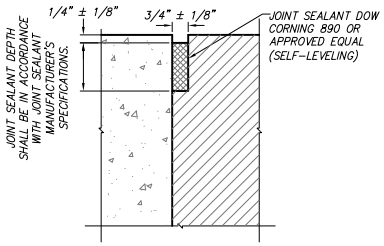
TYPE D - LONGITUDINAL / TRANSVERSE CONSTRUCTION JOINT

N.T.S.



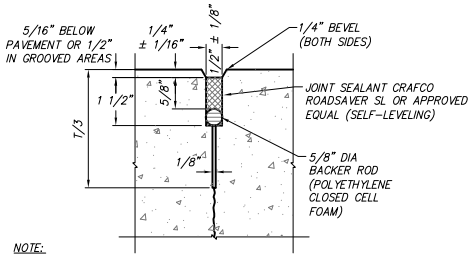
TYPICAL EXPANSION JOINT

N.T.S.



ASPHALT CONSTRUCTION JOINT

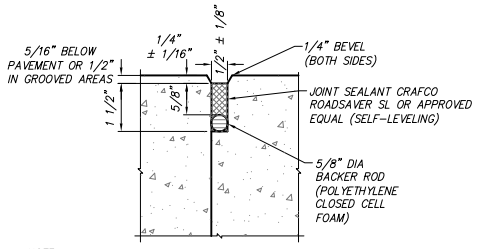
N.T.S.



NOTE:
TYPICAL JOINT SEALANT RESERVOIR FOR LONGITUDINAL CONSTRUCTION JOINTS WITHOUT 1/8" INITIAL CUT.

TYPICAL CONTRACTION JOINT

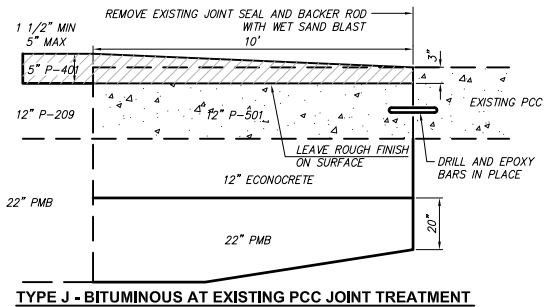
N.T.S.



NOTE:
TYPICAL JOINT SEALANT RESERVOIR FOR LONGITUDINAL CONSTRUCTION JOINTS WITHOUT 1/8" INITIAL CUT.

TYPICAL CONSTRUCTION JOINT

N.T.S.



TYPE J - BITUMINOUS AT EXISTING PCC JOINT TREATMENT

N.T.S.

REVISION NO.	DESCRIPTION	DATE

APPROVED BY:	LAWA STAFF
CHECKED BY:	ANTOINE FERMELIA
DRAWN BY:	WILLIAM P. MAREK
DATE:	10-11-2011

HNTB

DRAFT SUBMITTAL

LAWA STANDARD PLANS

PAVEMENT JOINT DETAILS – 1

LAWA STANDARD PLAN NUMBER **30.01**

SHEET: 11 OF 26

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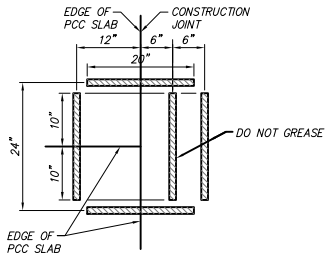
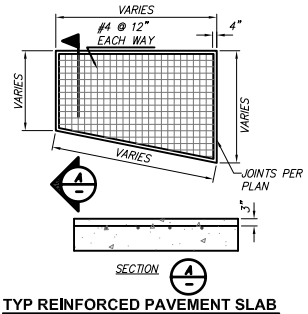
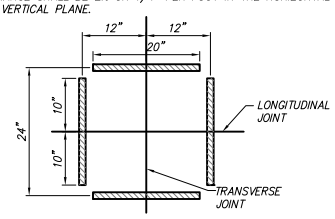


DOWEL BAR SKEWED EDGE PLACEMENT
N.T.S.

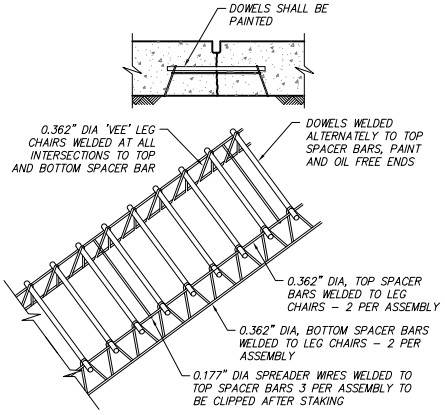


TYP REINFORCED PAVEMENT SLAB
N.T.S.

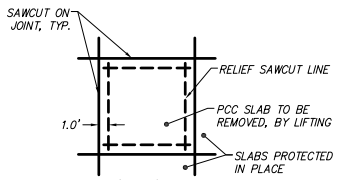
NOTE:
DOWELS ARE TO BE PLACED IN THE HORIZONTAL PLANE AND PERPENDICULAR TO THE JOINT. MAXIMUM ALLOWABLE TOLERANCE SHALL BE 2% OR 1/4" PER FOOT IN THE HORIZONTAL AND VERTICAL PLANE.



DOWEL BAR EDGE PLACEMENT (TYP)
N.T.S.

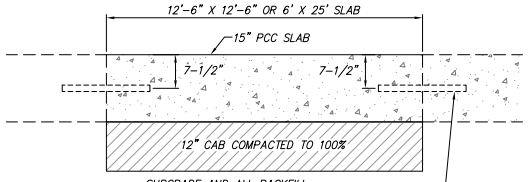


DOWEL BAR ASSEMBLY
N.T.S.



RELIEF SAWCUT DETAIL
NTS

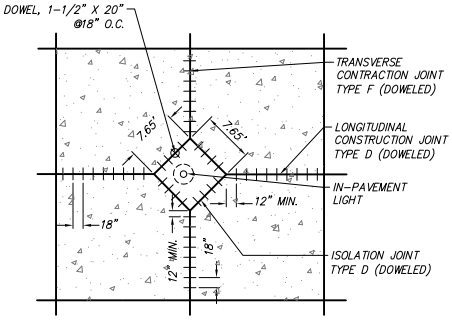
WIDTH OF SLAB REMOVAL AND REPLACEMENT MAY BE REDUCED TO 6'–0" WHEN SPECIFICALLY APPROVED BY THE AIRPORT ENGINEER.



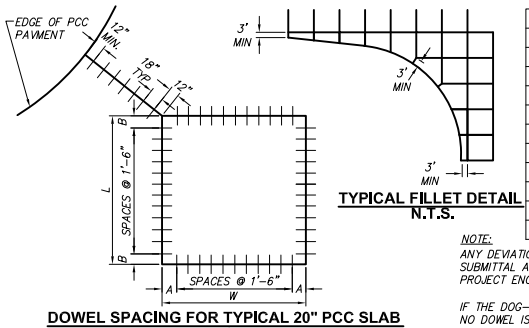
SUBGRADE AND ALL BACKFILL COMPACTED TO 95% MAX. DENSITY

1–1/4"" ø DOWELS, 20" LONG, SHALL BE INSTALLED AT 15" O.C. NON–SALVAGEABLE DOWELS SHALL BE REPLACED. WHERE NEW DOWELS ARE NECESSARRY, HOLES SHALL BE STAR DRILLED 10" INTO EXISTING SLAB AND SET LEVEL. DOWELS SHALL BE PAINTED ONE COAT OF RED LEAD, GREASED ON ONE END AND PACKED INTO HOLE WITH APPROVED EPOXY.

PCC SLAB REPLACEMENT
NTS



DIAMOND JOINT FOR TYPICAL 20" PCC SLAB
N.T.S.



TYPICAL FILLET DETAIL
N.T.S.

DOWEL SPACING FOR TYPICAL 20" PCC SLAB
N.T.S.

L	W	A	B
20.00'	20.00'	12"	12"
25.00'	25.00'	15"	15"
16.53'	20.00'	12"	9.18"
22.50'	20.00'	12"	18"
16.79'	20.00'	12"	10.74"
16.66'	20.00'	12"	9.96"
17.50'	25.00'	15"	15"
26.00'	25.00'	15"	12"
25.81'	25.00'	15"	10.86"
14.98'	25.00'	15"	17.88"
16.00'	20.00'	12"	15"

NOTE:
ANY DEVIATION FROM THIS DETAIL REQUIRES SUBMITTAL AND PRIOR APPROVAL FROM THE PROJECT ENGINGEER.

IF THE DOG–LEG JOINT IS LESS THAN 2.0', NO DOWEL IS REQUIRED.

GENERAL PAVING NOTES

1. USE TYPE D CONSTRUCTION JOINT WHERE PAVING OPERATIONS ARE DELAYED OR STOPPED.
2. DOWELS SHALL BE PROPERLY POSITIONED BY USE OF AN APPROVED SUPPORT ASSEMBLY.
3. SAWED EDGES OF PAVING SHALL BE STRAIGHT, VERTICAL AND SMOOTH.
4. JOINTS SHALL BE THOROUGHLY CLEARED BY COMPRESSED WATER AND WET SAND BLASTED PRIOR TO APPLICATION OF THE SEALANT
5. JOINT FACES SHALL BE DRY PRIOR TO PLACING SEALANT MATERIAL.
6. JOINT SEALANT DEPTH SHALL BE IN ACCORDANCE WITH JOINT SEALANT MANUFACTURER'S SPECIFICATIONS.
7. DOWEL BAR SPACING SHALL BE 18" ON CENTER. DOWEL BARS SHALL BE SPACED AT LEAST 18" FROM ANY SLAB CORNER AND THE SPACING FROM THE LAST DOWEL BARS ON A SIDE TO THE ADJACENT CORNERS SHALL BE THE SAME AT BOTH ENDS OF THE SLAB.

REVISION NO.	DESCRIPTION	DATE

APPROVED BY: LAWA STAFF
CHECKED BY: ANTONE FERMELIA
DRAWN BY: WILLIAM P. MAREK
DATE: 10–11–2011

HNTB

DRAFT SUBMITTAL

LAWA STANDARD PLANS

PAVEMENT JOINT DETAILS – 2

LAWA STANDARD PLAN NUMBER **30.02**

SHEET: 12 OF 26

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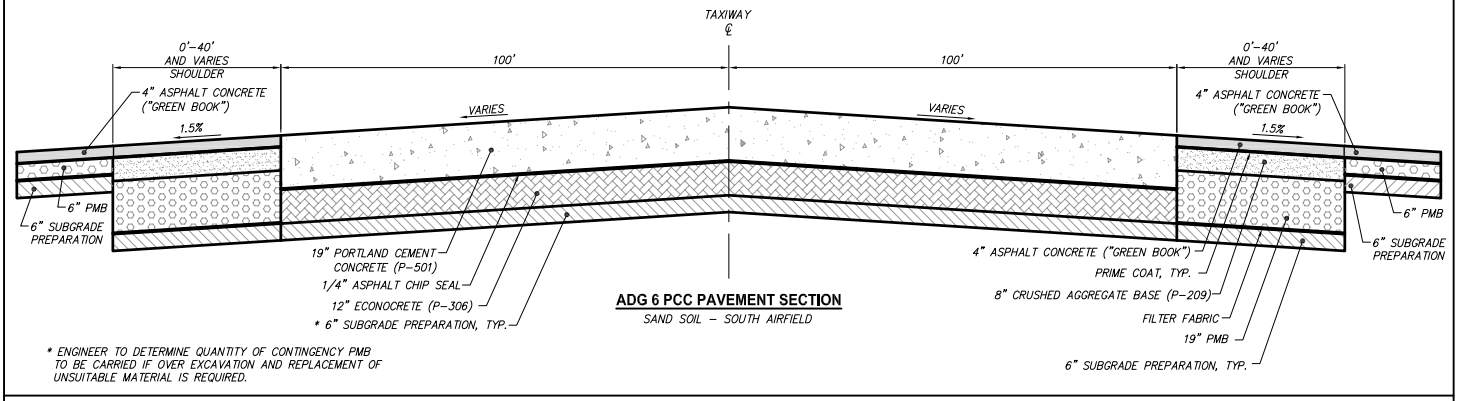
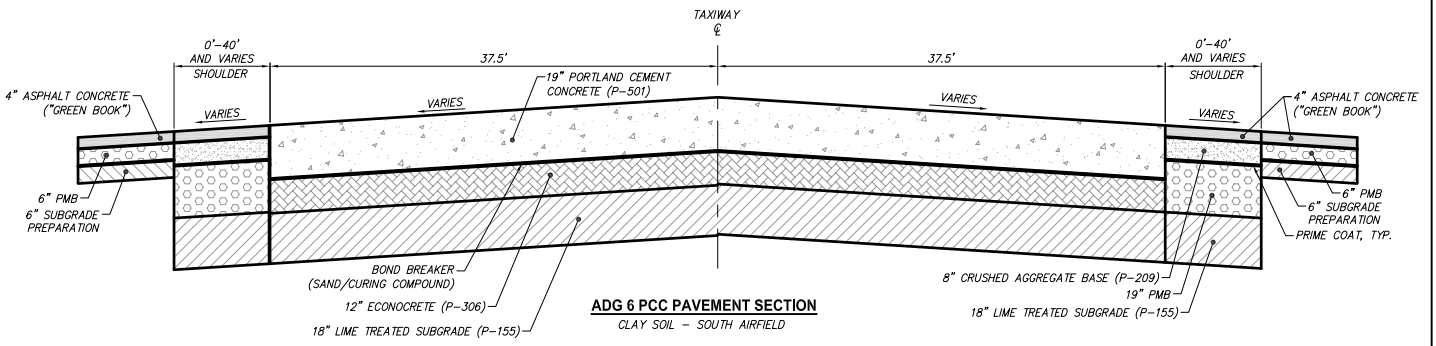


ADG 6 PCC PAVEMENT SECTION

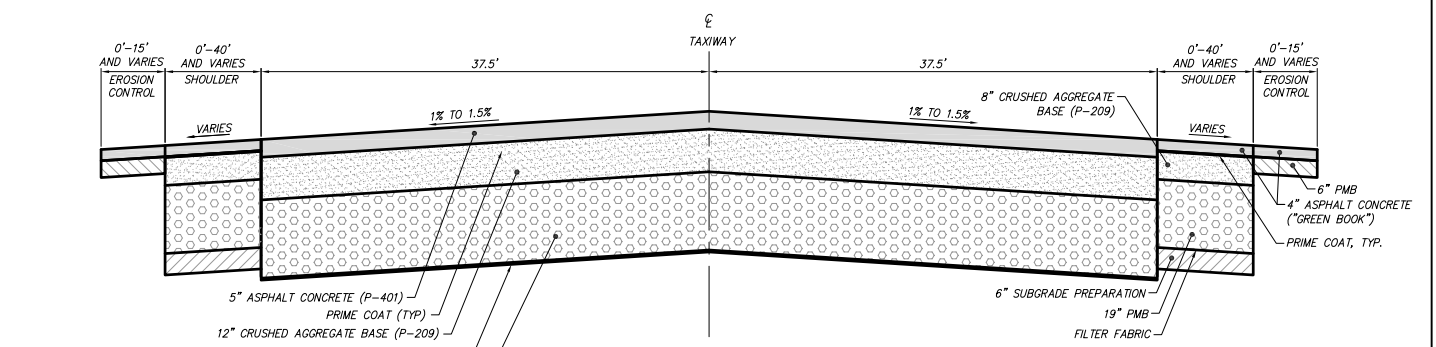
SAND SOIL – SOUTH AIRFIELD

* ENGINEER TO DETERMINE QUANTITY OF CONTINGENCY PMB TO BE CARRIED IF OVER EXCAVATION AND REPLACEMENT OF UNSUITABLE MATERIAL IS REQUIRED.



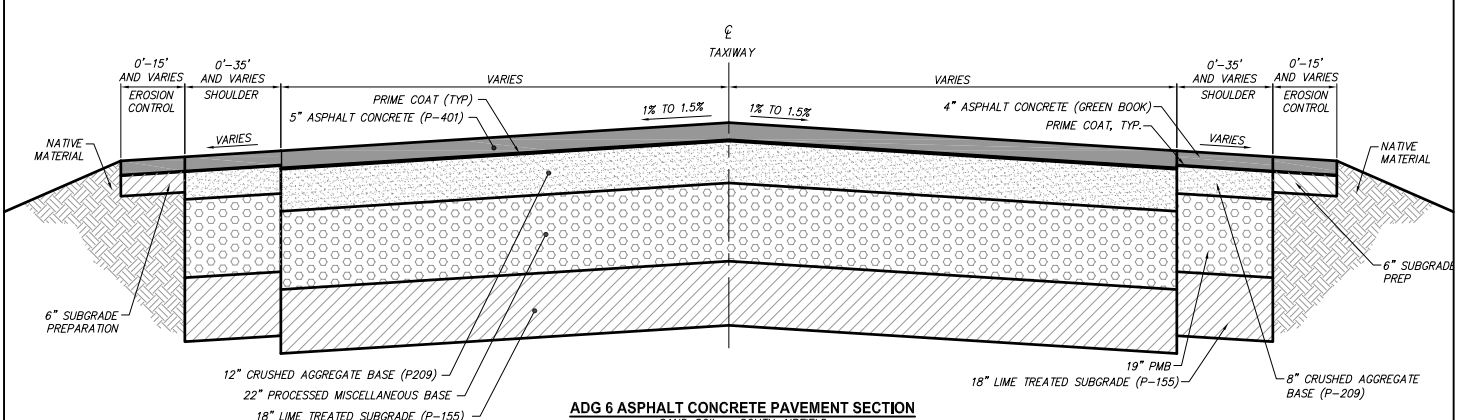
ADG 6 PCC PAVEMENT SECTION

CLAY SOIL – SOUTH AIRFIELD



ADG 6 ASPHALT CONCRETE PAVEMENT SECTION

SAND SOIL – SOUTH AIRFIELD



ADG 6 ASPHALT CONCRETE PAVEMENT SECTION

SAND SOIL – SOUTH AIRFIELD

REVISION NO.	DESCRIPTION	DATE

APPROVED BY:	LAWA STAFF
CHECKED BY:	ANTONE FERMELIA
DRAWN BY:	WILLIAM P. MAREK
DATE:	10-11-2011

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DRAFT SUBMITTAL

LAWA STANDARD PLANS

PAVEMENT SECTIONS

LAWA STANDARD PLAN NUMBER **31.01**

SHEET: 13 OF 26

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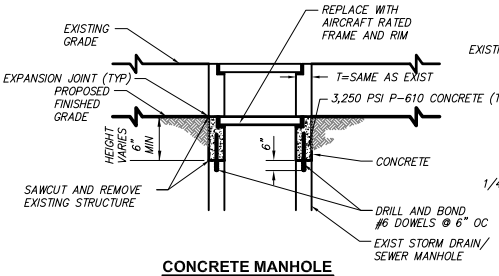
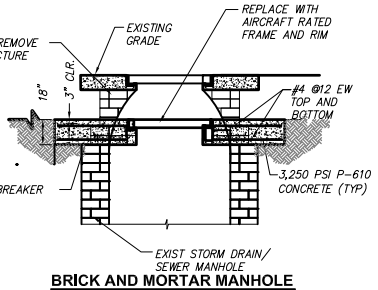


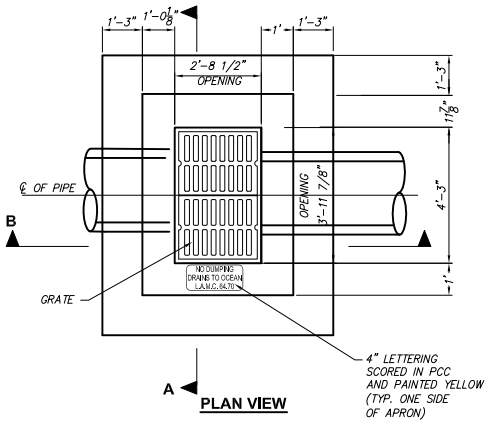
CONCRETE MANHOLE



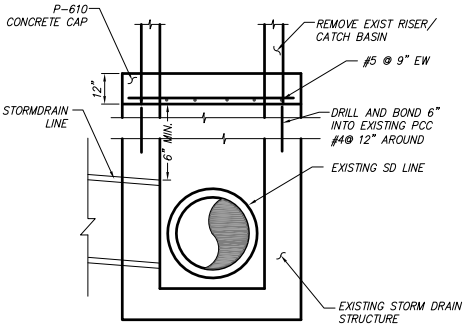
BRICK AND MORTAR MANHOLE

ADJUST STORM DRAIN MANHOLE TO GRADE DETAIL

NTS

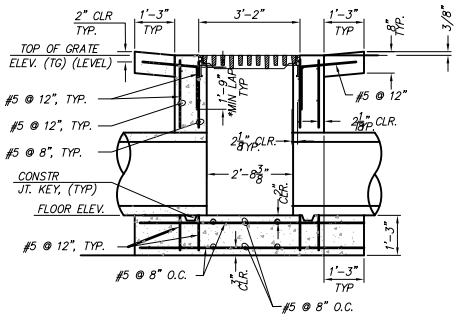


PLAN VIEW

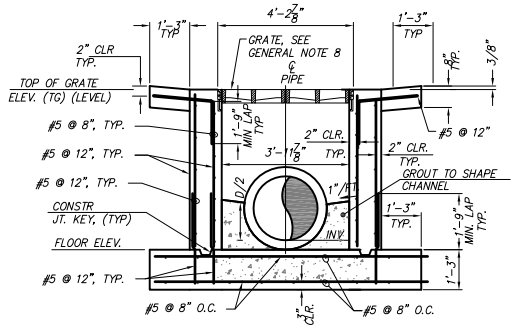


CAP CATCH BASIN OR MANHOLE STRUCTURE BELOW GRADE DETAIL

NTS



SECTION B



SECTION A

CATCH BASIN TYPE A

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

GENERAL NOTES:

1. ALL CONCRETE SHALL MEET THE REQUIREMENTS OF SECTION P-610.
2. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.
3. CONCRETE COVER ON ALL REINFORCING STEEL SHALL BE 2" MINIMUM.
4. THE MANHOLE FRAME AND LID SHALL BE AIRCRAFT RATED FOR 100,000 LBS. WHEEL LOAD NEENAH FOUNDRY CO. NO. R-3492, EAST JORDAN IRON WORKS NO. 1900 OR APPROVED EQUAL.
5. FOR NUMBER DESIGNATIONS, LOCATION OF MANHOLES, PIPE SIZES AND FLOWLINE ELEVATIONS, SEE GRADING AND DRAINAGE PLANS.
6. INVERT OF MANHOLE SHALL BE SHAPED TO PROVIDE SMOOTH FLOW.
7. THE CONTRACTOR MAY OPTIONALLY PROVIDE VERTICAL WALL REINFORCING STEEL FULL LENGTH FROM THE BOTTOM SLAB TO THE TOP OF WALL, IN LIEU OF USING THE 1'-9" LAP AT THE CONSTRUCTION JOINT BETWEEN THE WALL AND SLAB.
8. THE INLET FRAME AND BOLTED DOWN GRATE SHALL BE NEENAH FOUNDRY CO. NO. R-3475-F OR APPROVED EQUAL.

REVISION NO.	DESCRIPTION	DATE

APPROVED BY:	LAWA STAFF
CHECKED BY:	ANTONE FERMELIA
DRAWN BY:	WILLIAM P. MAREK
DATE:	10-11-2011

HNTB

DRAFT SUBMITTAL

LAWA STANDARD PLANS

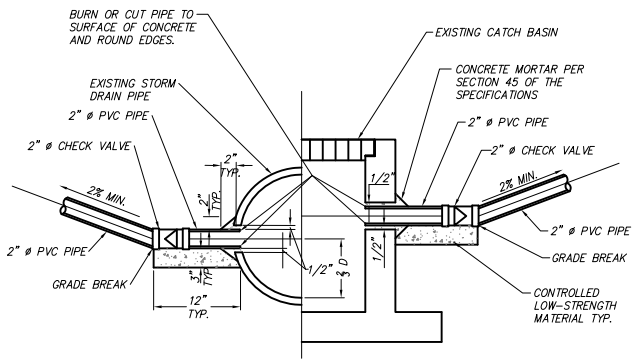
GRADING AND DRAINAGE DETAILS 1

LAWA STANDARD PLAN NUMBER

40.01

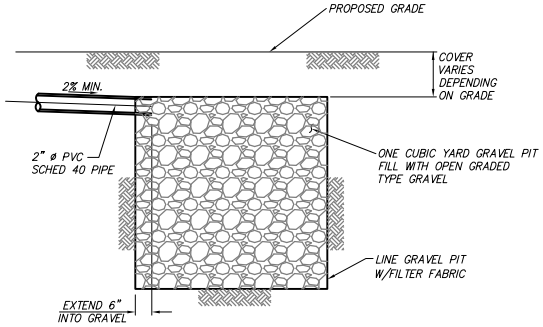
SHEET: 14 OF 26

J:\46357_LAWA_APMS\00_CADD\LAX\LAWA_STD\ 40.01.dwg Oct 11, 2011 - 11:29am



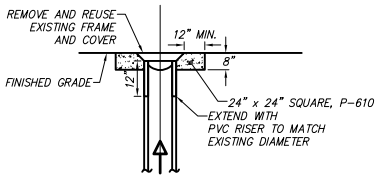
PVC CONNECTION TO EXISTING STORM DRAIN OR CATCH BASIN

NTS

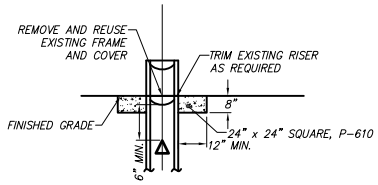


GRAVEL PIT DETAIL

NTS



RAISING DETAIL



LOWERING DETAIL

WATER VALVE COVER ADJUST TO GRADE

NTS

REVISION NO.	DESCRIPTION	DATE

APPROVED BY: LAWA STAFF
CHECKED BY: ANTONE FERMELIA
DRAWN BY: WILLIAM P. MAREK
DATE: 10-11-2011

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DRAFT SUBMITTAL

LAWA STANDARD PLANS

GRADING AND DRAINAGE DETAILS 2

LAWA STANDARD PLAN NUMBER **40.02**

SHEET: 15 OF 26

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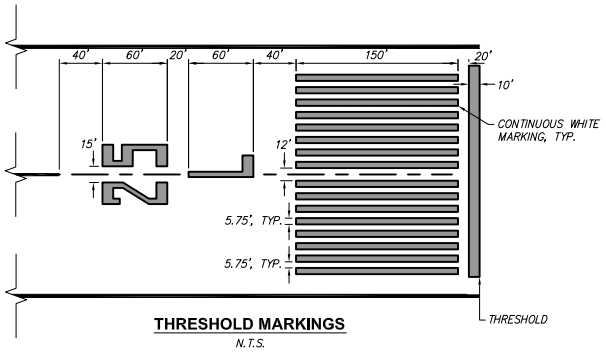
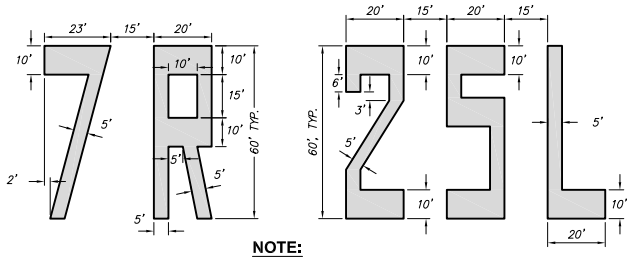


THRESHOLD MARKINGS

N.T.S.

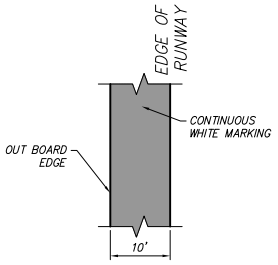


NOTE:

RUNWAY DESIGNATION MARKINGS ARE WHITE

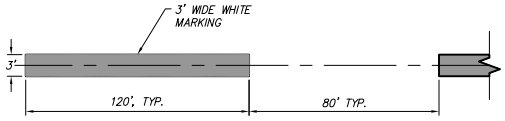
RUNWAY DESIGNATION MARKINGS

N.T.S.



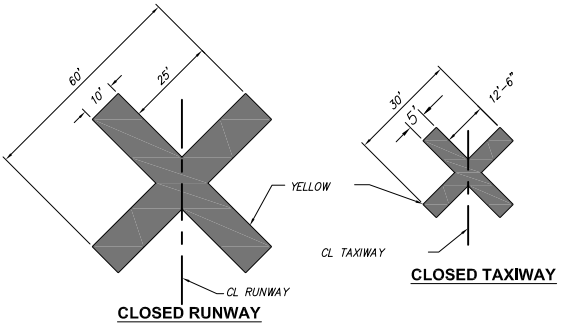
RUNWAY THRESHOLD BAR

N.T.S.



TYPICAL RUNWAY CENTERLINE MARKING

N.T.S.

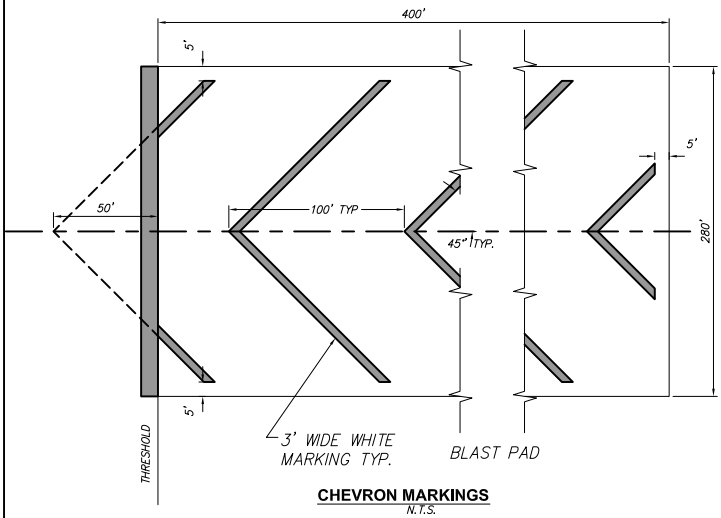


CLOSED RUNWAY

CLOSED TAXIWAY

TEMPORARY CLOSED RUNWAY AND TAXIWAY MARKINGS

N.T.S.

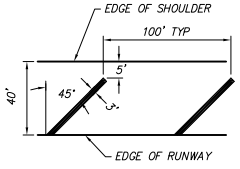


CHEVRON MARKINGS

N.T.S.

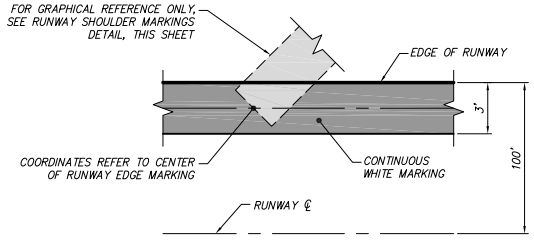
NOTE:

RUNWAY SHOULDER MARKINGS ARE YELLOW.



RUNWAY SHOULDER MARKINGS

N.T.S.



TYPICAL RUNWAY EDGE MARKING

N.T.S.

REVISION NO.	DESCRIPTION	DATE

APPROVED BY:	LAWA STAFF
CHECKED BY:	ANTONE FERMELIA
DRAWN BY:	WILLIAM P. MAREK
DATE:	10-11-2011

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LAWA STANDARD PLANS

RUNWAY MARKING

LAWA STANDARD PLAN NUMBER

50.01

SHEET: 16 OF 26

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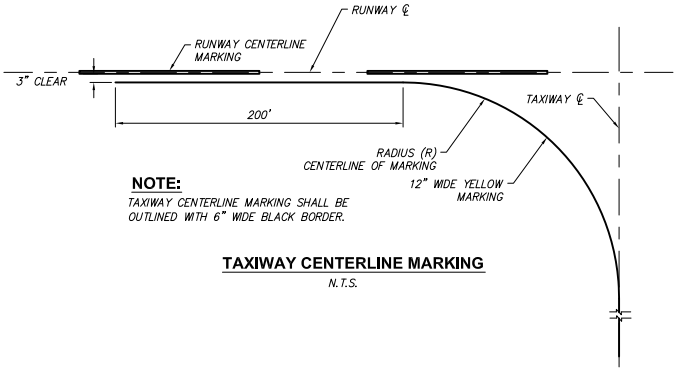
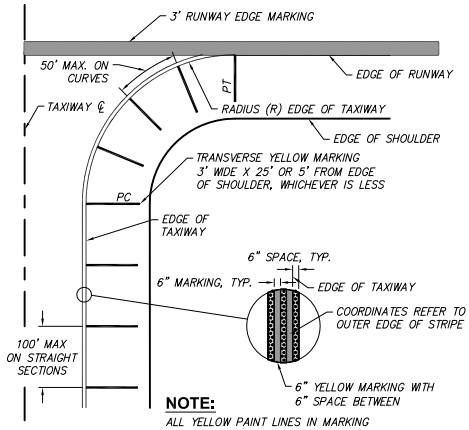


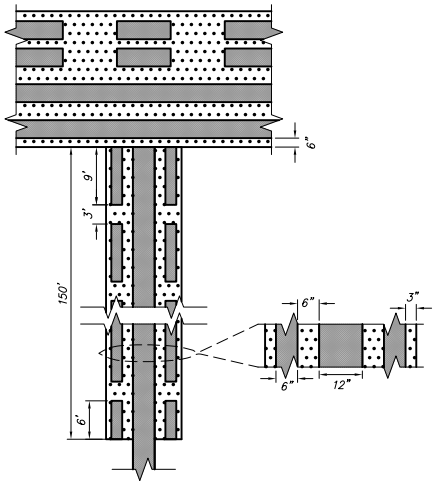
NOTE:
TAXIWAY CENTERLINE MARKING SHALL BE OUTLINED WITH 6" WIDE BLACK BORDER.

TAXIWAY CENTERLINE MARKING
N.T.S.

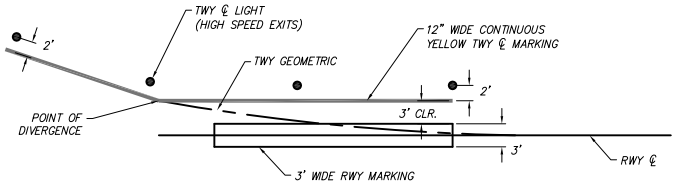


NOTE:
ALL YELLOW PAINT LINES IN MARKING SHALL BE OUTLINED WITH BLACK PAINT.

TAXIWAY EDGE AND SHOULDER MARKING
N.T.S.

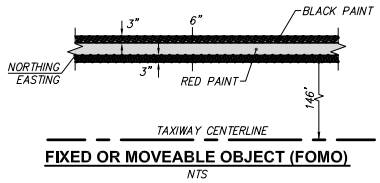


ENHANCED TAXIWAY CENTERLINE MARKING
N.T.S.



NOTE:
THE TAXIWAY ℄ MARKING IS A TANGENT (4.75' OFFSET FROM RWY ℄) UNTIL THE GEOMETRIC ℄ IS INTERSECTED. SEE PLANS.

TAXIWAY SPIRAL CENTERLINE MARKING
N.T.S.



FIXED OR MOVEABLE OBJECT (FOMO)
NTS

REVISION NO.	DESCRIPTION	DATE

APPROVED BY:	LAWA STAFF
CHECKED BY:	ANTONE FERMELIA
DRAWN BY:	WILLIAM P. MAREK
DATE:	10-11-2011

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LAWA STANDARD PLANS
TAXIWAY CENTERLINE MARKING

LAWA STANDARD PLAN NUMBER
50.02
SHEET: 17 OF 26

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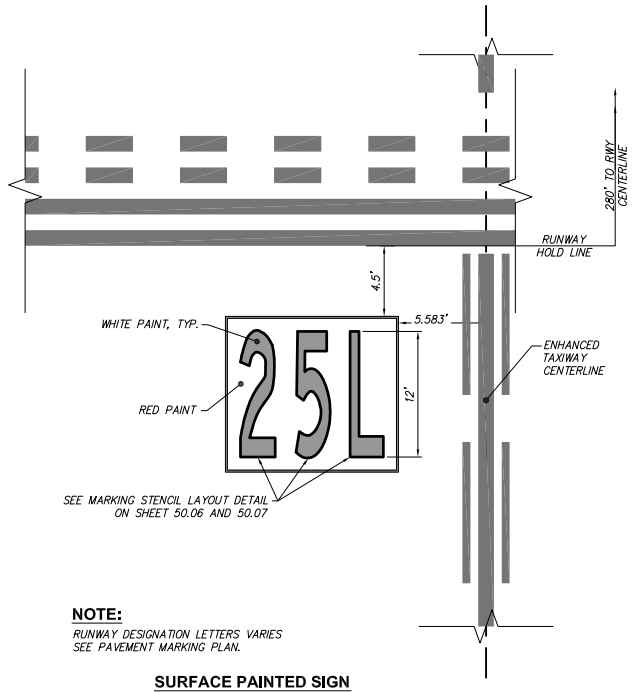
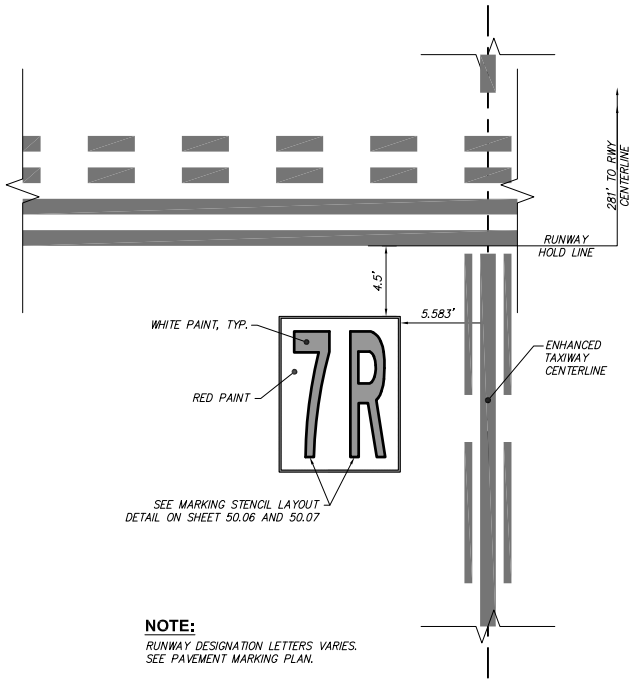


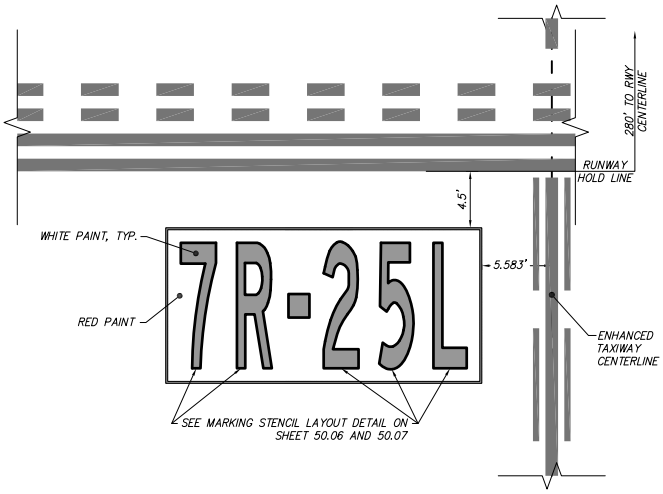
NOTE:
RUNWAY DESIGNATION LETTERS VARIES
SEE PAVEMENT MARKING PLAN.

SURFACE PAINTED SIGN
N.T.S.



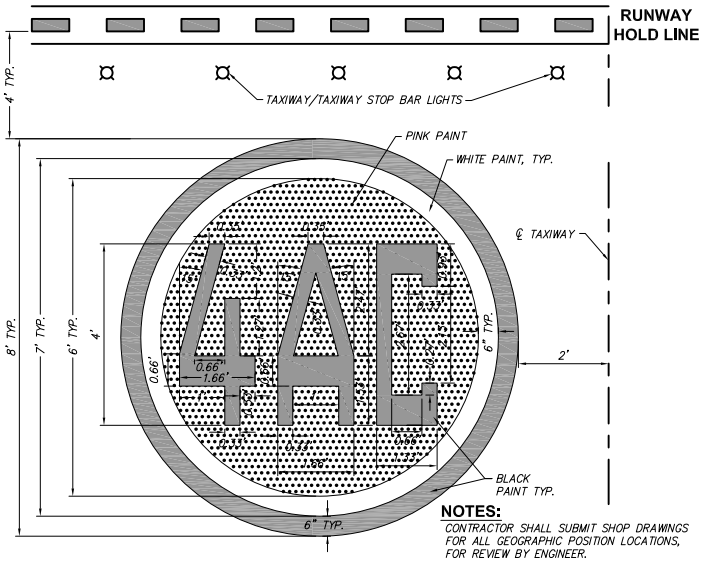
NOTE:
RUNWAY DESIGNATION LETTERS VARIES.
SEE PAVEMENT MARKING PLAN.

SURFACE PAINTED SIGN
N.T.S.



NOTE:
RUNWAY DESIGNATION LETTERS VARIES
SEE PAVEMENT MARKING PLAN.

SURFACE PAINTED SIGN
N.T.S.



NOTES:
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL GEOGRAPHIC POSITION LOCATIONS, FOR REVIEW BY ENGINEER.

GEOGRAPHIC POSITION MARKING
N.T.S.

REVISION NO.	DESCRIPTION	DATE

APPROVED BY:	LAWA STAFF
CHECKED BY:	ANTONE FERMELIA
DRAWN BY:	WILLIAM P. MAREK
DATE:	10-11-2011

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LAWA STANDARD PLANS

SURFACE PAINTED SIGNS

LAWA STANDARD PLAN NUMBER
50.03
SHEET: 18 OF 26

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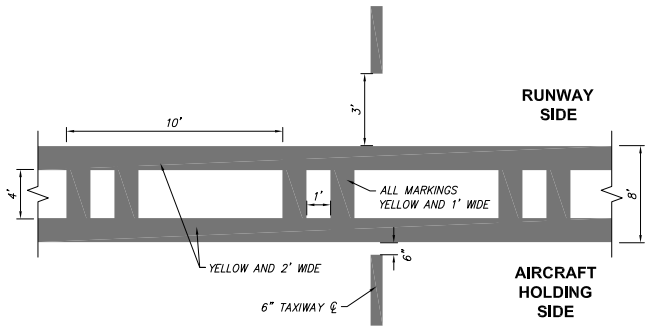
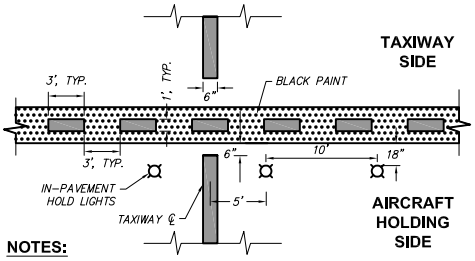


ILS/MLS HOLDING POSITION MARKING

N.T.S.

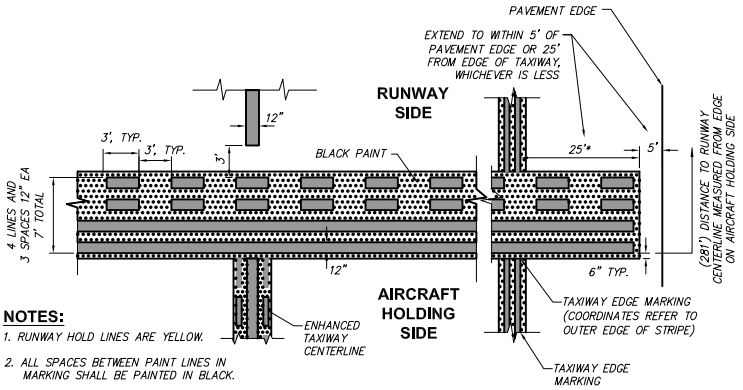


NOTES:

1. RUNWAY HOLD LINES ARE YELLOW
2. ALL SPACES BETWEEN PAINT LINES IN MARKING SHALL BE PAINTED IN BLACK.
3. HOLD LIGHT SPACING VARIES, SEE LIGHTING PLANS FOR ADDITIONAL INFORMATION..

TAXIWAY ON TAXIWAY HOLD LINE MARKING

N.T.S.



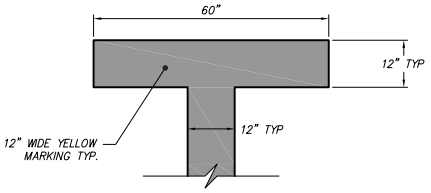
NOTES:

1. RUNWAY HOLD LINES ARE YELLOW.
2. ALL SPACES BETWEEN PAINT LINES IN MARKING SHALL BE PAINTED IN BLACK.

* IF A LIGHT FIXTURE OR SIGN IS LOCATED ON THE TAXIWAY SHOULDER AND ALIGNED WITH THE EXTENDED HOLDING POSITION MARKING, THE EXTENDED HOLDING POSITION MARKING SHOULD BE EXTENDED NO CLOSER THAN 5 FEET TO THE EDGE OF THE LIGHT OR SIGN.

ENHANCED RUNWAY HOLD LINE MARKING

N.T.S.



NOSE WHEEL STOP MARK DETAIL

N.T.S.

REVISION NO.	DESCRIPTION	DATE

APPROVED BY:	LAWA STAFF
CHECKED BY:	ANTONE FERMELIA
DRAWN BY:	WILLIAM P. MAREK
DATE:	10-11-2011

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LAWA STANDARD PLANS

AIRCRAFT HOLD MARKING

LAWA STANDARD PLAN NUMBER

50.04

SHEET: 19 OF 26

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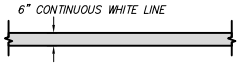
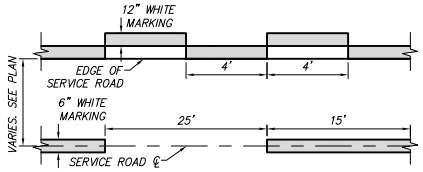


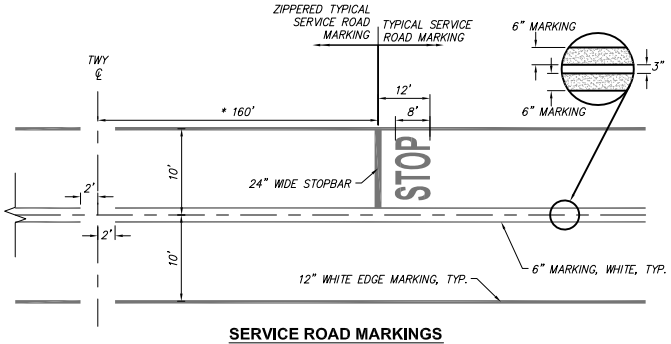
EDGE OF ROADWAY MARKING - TYPE A

NTS



ZIPPERED SERVICE ROAD MARKING - TYPE B

NTS



SERVICE ROAD MARKINGS

N.T.S.

* ENGINEER TO DETERMINE DISTANCE BASED ON TYPE OF AIRCRAFT USING TAXIWAY

REVISION NO.	DESCRIPTION	DATE

APPROVED BY: LAWA STAFF
CHECKED BY: ANTONE FERMELIA
DRAWN BY: WILLIAM P. MAREK
DATE: 10-11-2011

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LAWA STANDARD PLANS

SERVICE ROAD MARKING

LAWA STANDARD PLAN NUMBER **50.05**

SHEET: 20 OF 26

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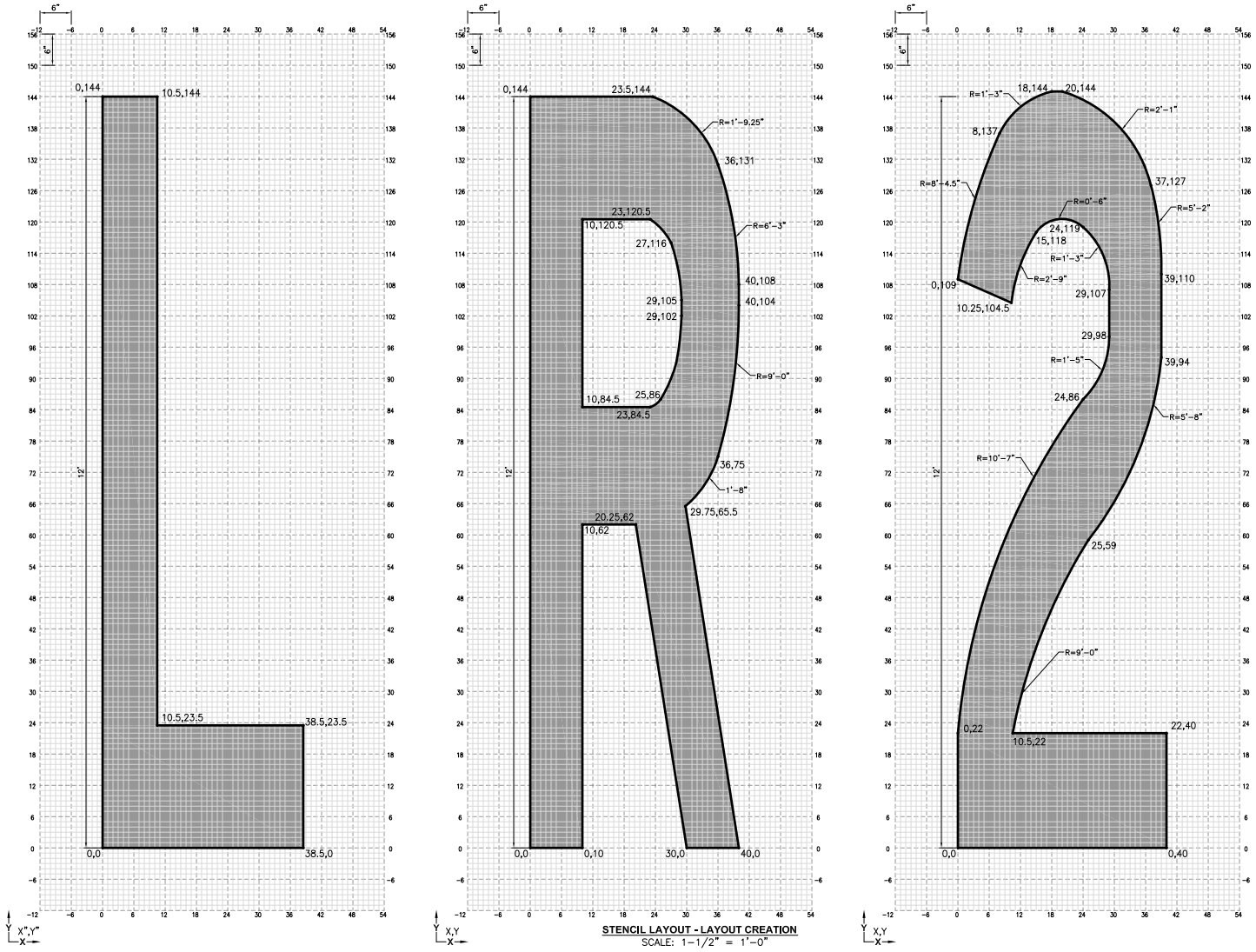

STENCIL LAYOUT - LAYOUT CREATION
SCALE: 1-1/2" = 1'-0"

REVISION NO.	DESCRIPTION	DATE

APPROVED BY: LAWA STAFF
CHECKED BY: ANTONE FERMELIA
DRAWN BY: WILLIAM P. MAREK
DATE: 10-11-2011

HNTB

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LAWA STANDARD PLANS
SURFACE PAINTED SIGN
STENCIL 1

LAWA STANDARD PLAN NUMBER
50.06
SHEET: 21 OF 26

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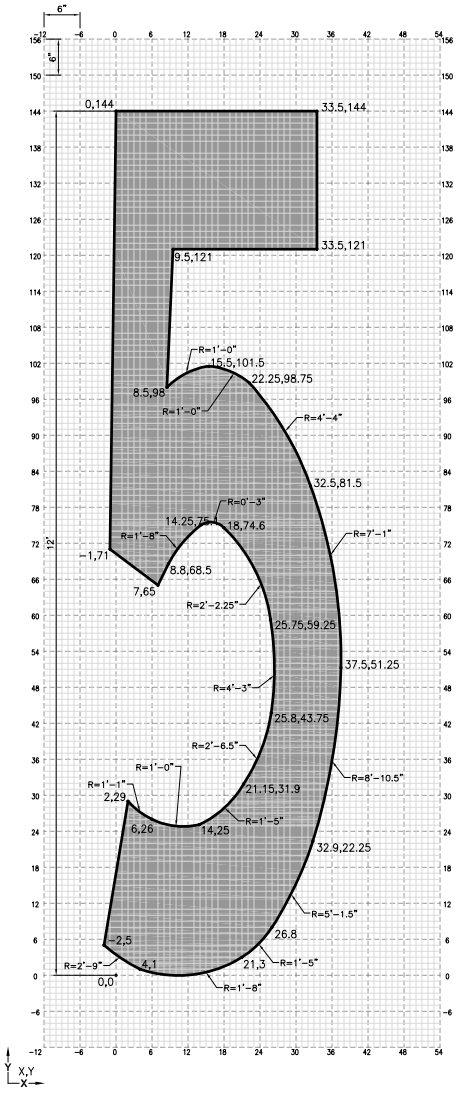
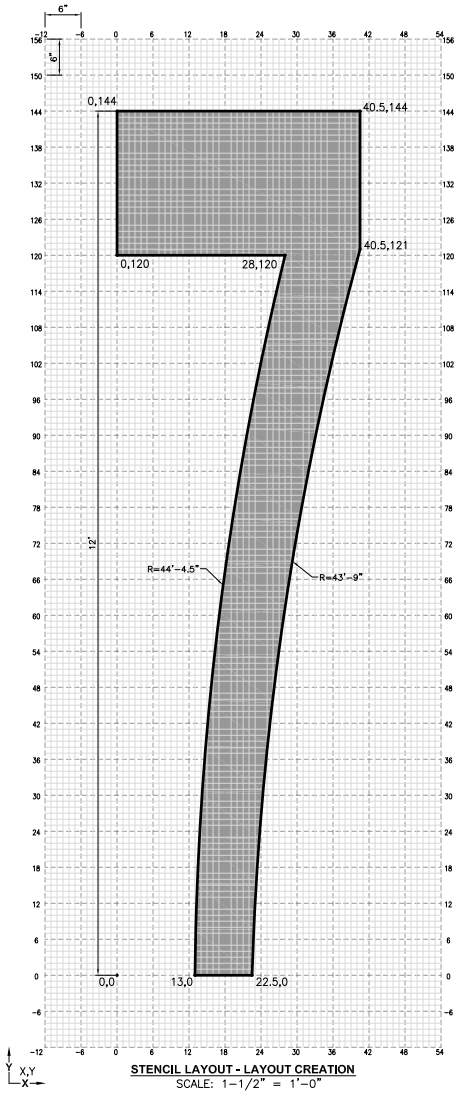
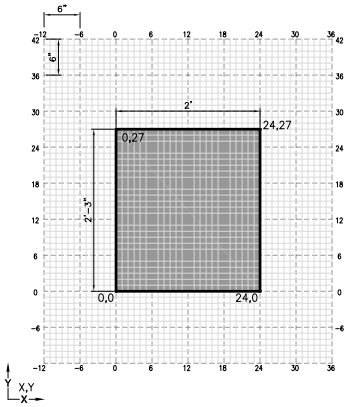




STENCIL LAYOUT - LAYOUT CREATION
SCALE: 1-1/2" = 1'-0"



REVISION NO.	DESCRIPTION	DATE

APPROVED BY: LAWA STAFF
CHECKED BY: ANTONE FERMELIA
DRAWN BY: WILLIAM P. MAREK
DATE: 10-11-2011

HNTB

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LAWA STANDARD PLANS
SURFACE PAINTED SIGN
STENCIL 2

LAWA STANDARD PLAN NUMBER
50.07
SHEET: 22 OF 26

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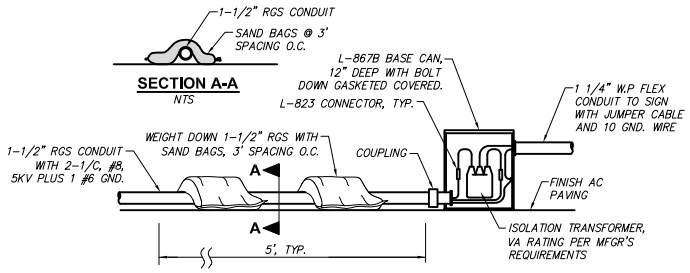
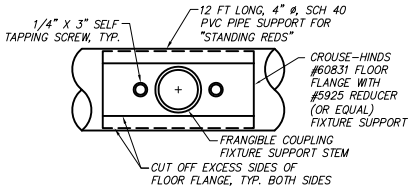
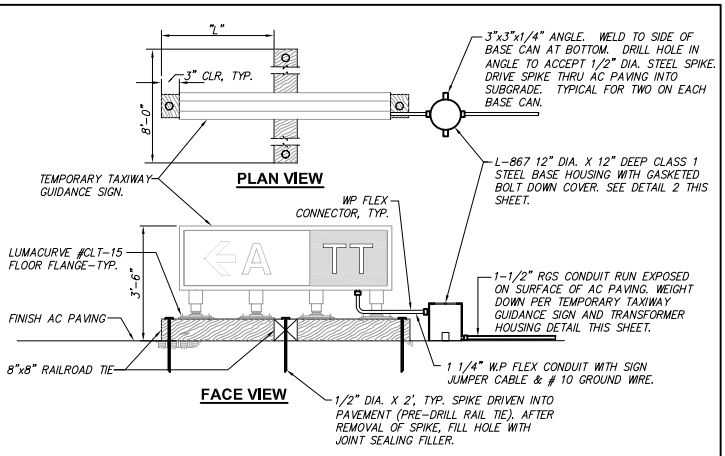


TEMPORARY TAXIWAY GUIDANCE SIGN AND TRANSFORMER HOUSING
NTS



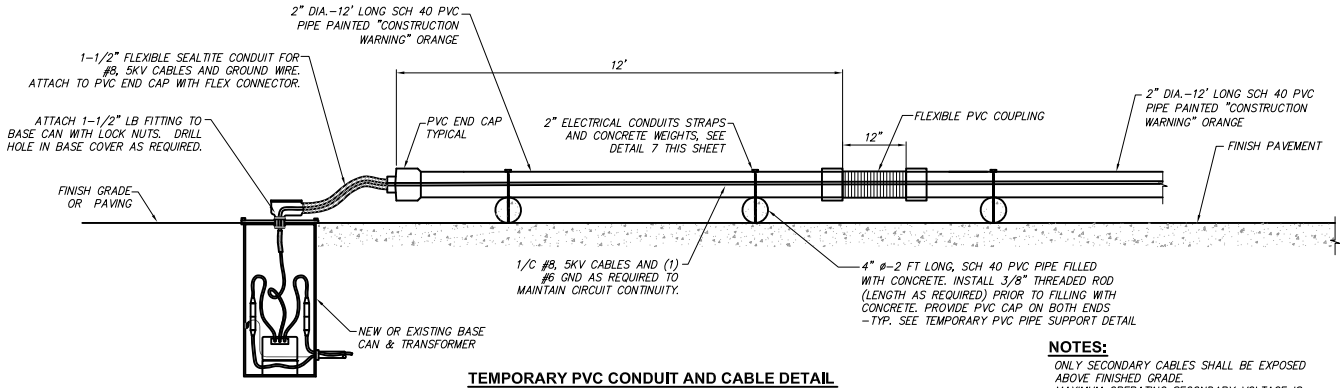
"STANDING RED" FIXTURE SUPPORT DETAIL
NTS



TEMPORARY TAXIWAY SIGN DETAIL
NTS

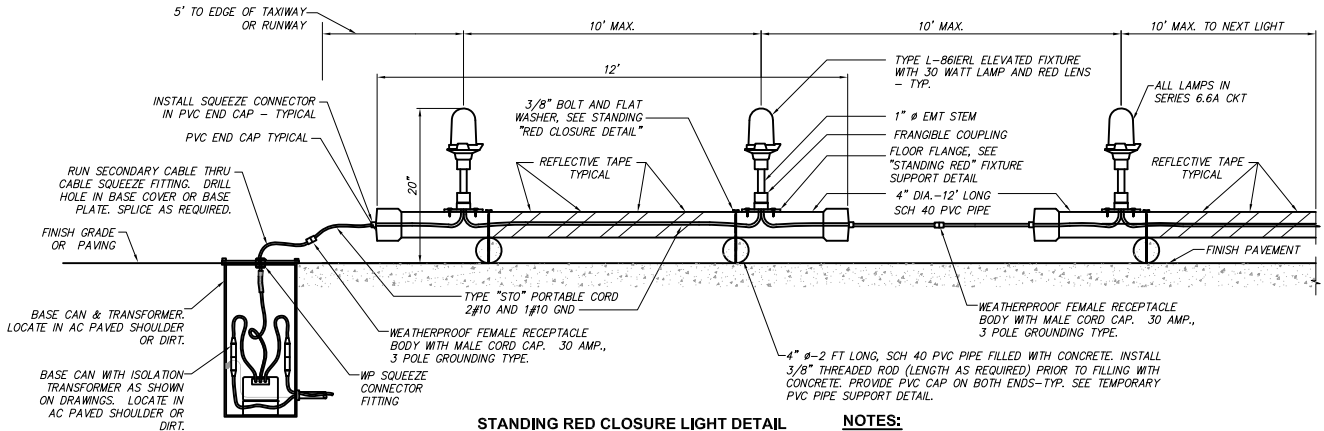
NOTES:

1. ALL TEMPORARY GUIDANCE SIGNS SHALL BE INSTALLED ON A TEMPORARY SUPPORT STRUCTURE, WITH NEW BASE HOUSING, L-830 TRANSFORMER, NEW CABLES AND ALL APPURTENANCES REQUIRED FOR A COMPLETE INSTALLATION.
2. "L" DIMENSION IS BASED ON TOTAL LENGTH OF SIGN REQUIRED. MORE THAN ONE RAIL ROAD TIE MAY BE REQUIRED.
3. REFER TO SIGN SCHEDULE ON SHEET E402 FOR SIGN NOMENCLATURE.
4. AFTER CONSTRUCTION INVOLVING TEMPORARY TAXIWAY SIGNS WORK IS COMPLETED, DELIVER SIGNS, TRANSFORMERS & BASE HOUSING TO LAWA C&M.



TEMPORARY PVC CONDUIT AND CABLE DETAIL FOR 5KV CIRCUIT CONTINUITY
NTS

NOTES:
ONLY SECONDARY CABLES SHALL BE EXPOSED ABOVE FINISHED GRADE. MAXIMUM OPERATING SECONDARY VOLTAGE IS 30.8 VOLTS.



STANDING RED CLOSURE LIGHT DETAIL
NTS

NOTES:

1. ONLY SECONDARY CABLES SHALL BE EXPOSED ABOVE FINISHED GRADE. MAXIMUM OPERATING SECONDARY VOLTAGE IS 30.8 VOLTS.
2. PROVIDE SHORTING CAP ON LAST LIGHT IN SEQUENCE TO COMPLETE CIRCUIT.

REVISION NO.	DESCRIPTION	DATE

APPROVED BY:	LAWA STAFF
CHECKED BY:	ANTONE FERMELIA
DRAWN BY:	WILLIAM P. MAREK
DATE:	10-11-2011

HNTB

DRAFT SUBMITTAL

LAWA STANDARD PLANS

TEMPORARY ELECTRICAL

LAWA STANDARD PLAN NUMBER
E20.01
SHEET: 23 OF 26

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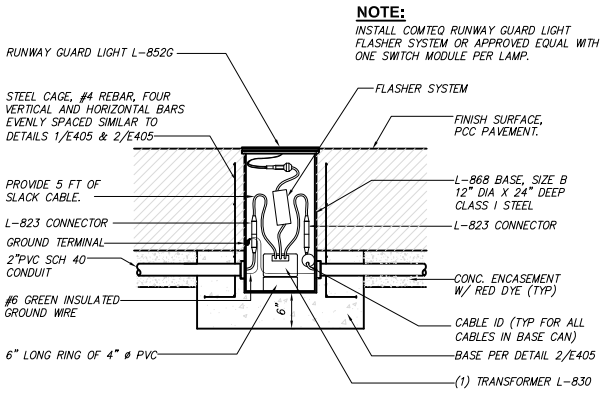
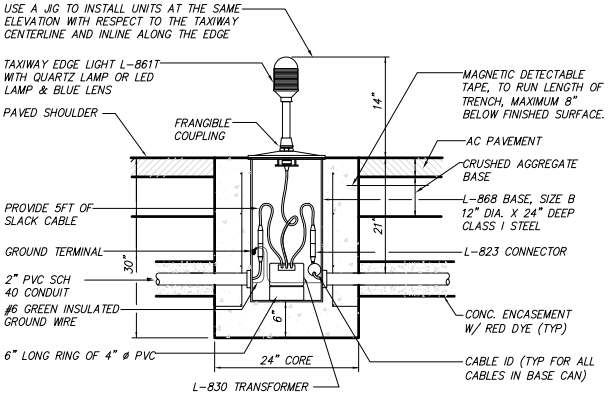


NOTE:
INSTALL COMTEQ RUNWAY GUARD LIGHT FLASHER SYSTEM OR APPROVED EQUAL WITH ONE SWITCH MODULE PER LAMP.

IN-PAVEMENT RUNWAY GUARD LIGHT LOCATED IN PCC PAVEMENT

NTS

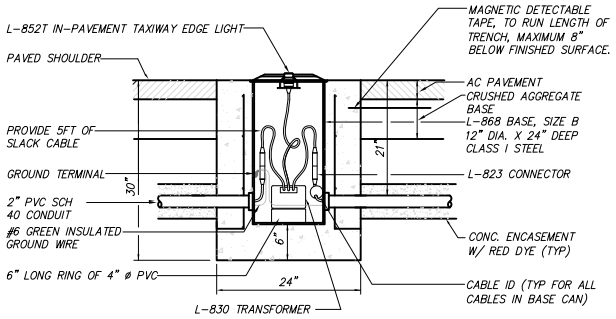


ELEVATED TAXIWAY EDGE LIGHT IN EXISTING OR PROPOSED AC SHOULDER

NTS

NOTE:

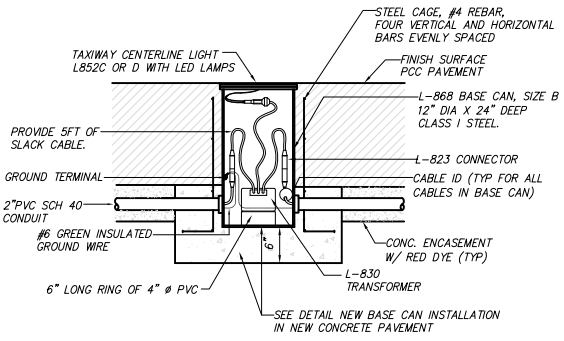
1. WHERE NEW FIXTURES ARE TO BE INSTALLED IN NEW AC SHOULDER, CONTRACTOR SHALL TRENCH AND INSTALL CONDUIT AND CONCRETE ENCASEMENT PRIOR TO NEW AC PAVEMENT PLACEMENT.
2. AFTER NEW AC PAVEMENT IS IN PLACE, CONTRACTOR SHALL CORE 24" DIAMETER BY 30" DEEP HOLE IN NEW AC PAVEMENT, INSTALL AND CONNECT NEW BASE CAN, STEEL REBAR CAGE AND CONCRETE ENCASEMENT INSURING THAT CONCRETE IS ADEQUATELY PLACED UNDER BASE CAN.
3. NEW BASE CAN SHALL BE SET 1/2" ABOVE FINISH AC PAVEMENT SURFACE.
4. CONCRETE ENCASEMENT FOR FIXTURES, EITHER IN EXISTING AC PAVEMENT OR NEW AC PAVEMENT SHALL CONTAIN BLACK DYE.



IN-PAVEMENT TAXIWAY EDGE LIGHT IN SHOULDER

NTS

NOTE:
REFER TO FLUSH MOUNTED FIXTURE INSTALLATION DETAIL FOR TYPICAL BASE CAN INSTALLATION DETAILS, REBAR CAGE, GROMMETS, CIRCUIT ID TAGS, CONCRETE ANCHORS, ETC.



IN-PAVEMENT TAXIWAY CENTERLINE LIGHT DETAIL

NTS

REVISION NO.	DESCRIPTION	DATE

APPROVED BY:	LAWA STAFF
CHECKED BY:	ANTONE FERMELIA
DRAWN BY:	WILLIAM P. MAREK
DATE:	10-11-2011

HNTB

DRAFT SUBMITTAL

LAWA STANDARD PLANS

BASE CAN INSTALLATION IN PROPOSED PCC PAVEMENT

LAWA STANDARD PLAN NUMBER

E20.02

SHEET: 24 OF 26

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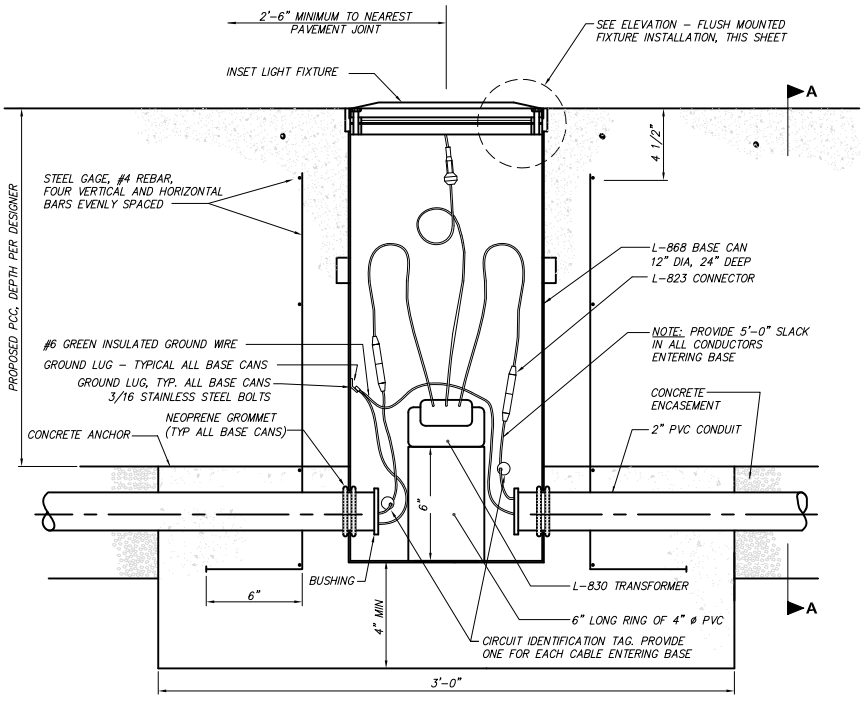
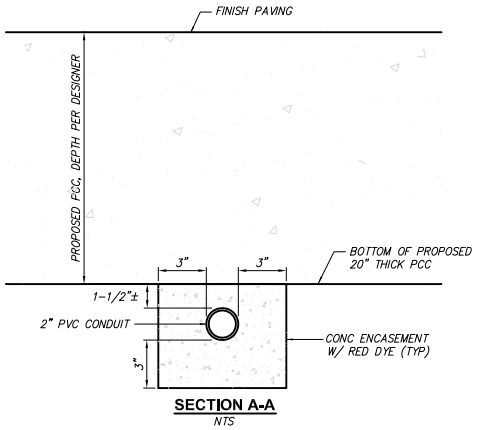


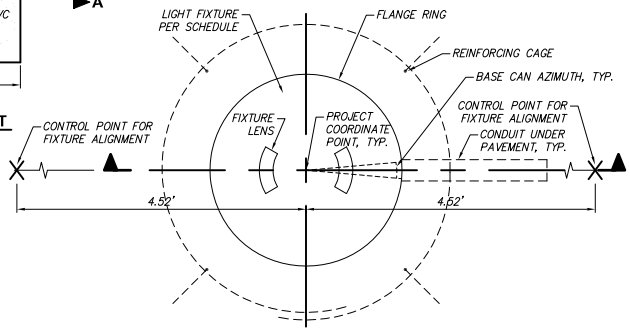
NEW BASE CAN INSTALLATION IN PROPOSED CONCRETE PAVEMENT

NTS



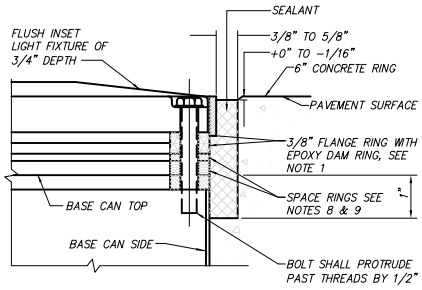
SECTION A-A

NTS



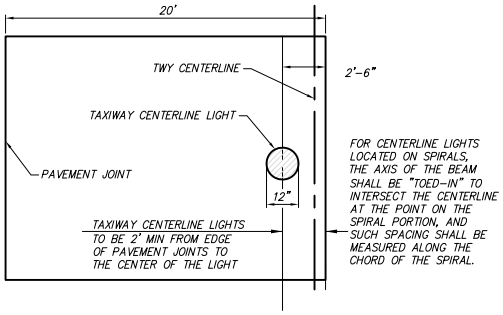
PLAN - BASE CAN INSTALLATION

NTS



ELEVATION - FLUSH MOUNTED FIXTURE INSTALLATION

NTS



SPACING FOR TAXIWAY CENTERLINE LIGHTS

NTS

REVISION NO.	DESCRIPTION	DATE

APPROVED BY:	LAWA STAFF
CHECKED BY:	ANTONE FERMELIA
DRAWN BY:	WILLIAM P. MAREK
DATE:	10-11-2011

HNTB

DRAFT SUBMITTAL

LAWA STANDARD PLANS

BASE CAN INSTALLATION IN PROPOSED PCC PAVEMENT

LAWA STANDARD PLAN NUMBER

E20.03

SHEET: 25 OF 26

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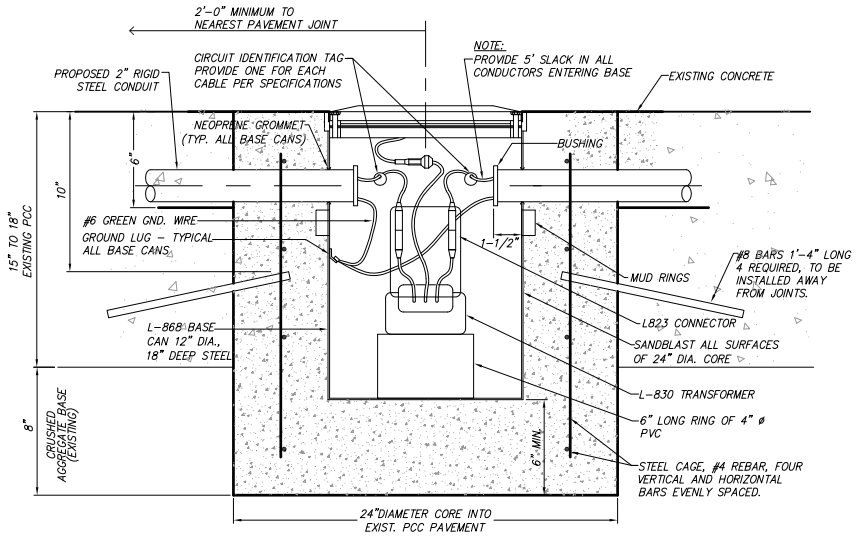
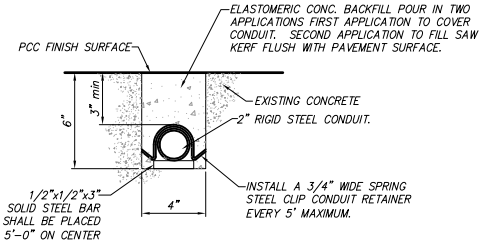


NEW BASE CAN INSTALLATION IN EXISTING CONCRETE PAVEMENT

NTS

NOTES:

1. FOR SAW CUT SEE DETAILS 2 AND 3, THIS SHEET.
2. EPOXY REBAR IN CONCRETE.
3. STEEL CAGE SHALL BE #4 REBAR, FOUR (4) VERTICAL AND FOUR (4) HORIZONTAL BARS EVENLY SPACED.
4. USE RAPID SET, NON-SHRINK GROUT FOR CONCRETE BACKFILL.
5. ALL STEEL FITTINGS, NUTS, BOLTS, ETC. SHALL BE 316 STAINLESS STEEL.

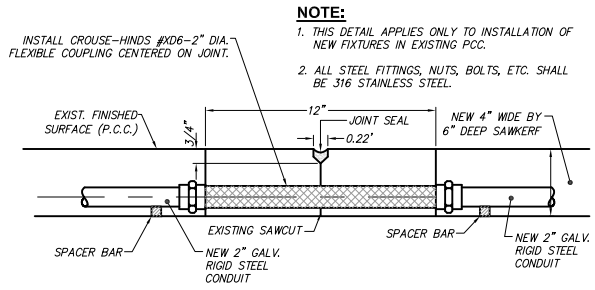


CONDUIT SAW KERF SECTION IN EXISTING P.C.C.

NTS

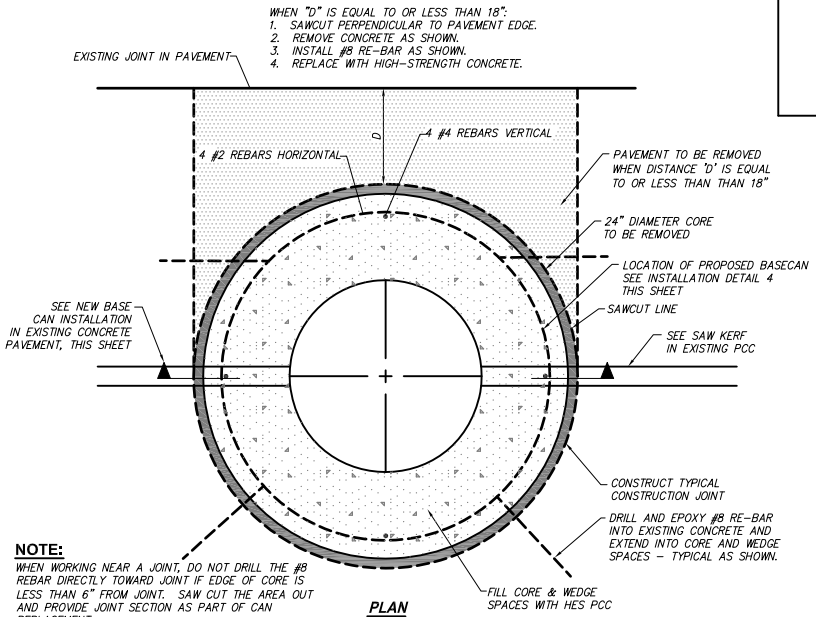
NOTE:

1. THIS DETAIL APPLIES ONLY TO INSTALLATION OF NEW FIXTURES IN EXISTING PCC.
2. ALL STEEL FITTINGS, NUTS, BOLTS, ETC. SHALL BE 316 STAINLESS STEEL.



FLEXIBLE COUPLING INSTALLATION IN TRANSVERSE & LONGITUDINAL JOINTS OF EXISTING P.C.C. PAVEMENT

NTS



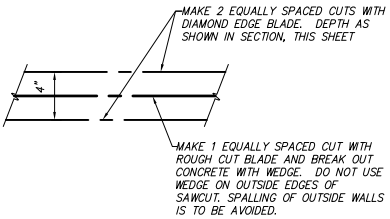
NOTE:

WHEN WORKING NEAR A JOINT, DO NOT DRILL THE #8 REBAR DIRECTLY TOWARD JOINT IF EDGE OF CORE IS LESS THAN 6" FROM JOINT. SAW CUT THE AREA OUT AND PROVIDE JOINT SECTION AS PART OF CAN REPLACEMENT.

PLAN

CORING AND FIXTURE INSTALLATION

NTS



SAW KERF IN EXISTING P.C.C.

NTS

REVISION NO.	DESCRIPTION	DATE

APPROVED BY:	LAWA STAFF
CHECKED BY:	ANTONE FERMELIA
DRAWN BY:	WILLIAM P. MAREK
DATE:	10-11-2011

HNTB

DRAFT SUBMITTAL

LAWA STANDARD PLANS

TAXIWAY AND GUARD LIGHT INSTALLATION DETAILS

LAWA STANDARD PLAN NUMBER

E20.04

SHEET: 26 OF 26

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INSTRUCTIONS

1. Determine Pavement Type:
   a. Rigid (Portland Cement Concrete) => Use Rigid Design Pagea
   b. Flexible (Asphalt Concrete) => Use Flexible Design Pages.

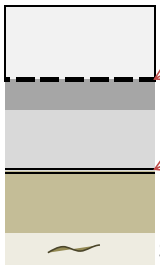
2. Input Required:
   a. Traffic Group: See Supplemental Information Page for additional information; to be assigned based on location
   b. Soil CBR: See Supplemental Information Page for additional information; to be assigned based on geotechnical study.

3. Determine required section:
   Using appropriate figures and input parameters, follow diagrams, left to right, for required pavement layer thicknesses.

SUPPLEMENTAL INFORMATION

TYPICAL SECTIONS

RIGID



P-501 Portland Cement Concrete, thickness as indicated, Rigid Design Charts

Sand Bond Breaker

P-304 Cement Treated Base Course, thickness as indicated, Rigid Design Charts

P-154 Aggregate Subbase course, thickness as indicated, Rigid Design Charts

OPTIONAL: Tensar 1200 BX Geogrid, if indicated, Rigid Design Charts

OPTIONAL: 18" Lime-Treated Subgrade, to strength indicated, Rigid Design Charts

Scarify Subgrade to provide required density at depth, FAA P-152

FLEXIBLE

P-401 Bituminous Surface Course, thickness as indicated, Flexible Design Charts

P-304 Cement Treated Base Course with microcracking compaction, thickness as indicated, Flexible Design Charts

P-154 Aggregate Subbase course, thickness as indicated, Flexible Design Charts

OPTIONAL: Tensar 1200 BX Geogrid, if indicated, Flexible Design Charts

OPTIONAL: 18" Lime-Treated Subgrade, to strength indicated, Rigid Design Charts

Scarify Subgrade to provide required density at depth, FAA P-152

TRAFFIC

Traffic to be used for design is based on location. See traffic map or select appropriate category:

Traffic Category naming convention:

a) "NS" => LAX: Northside of the Airport; "SS" => LAX: Southside of the Airport
"ONT" => Ontario Airport; "VNY" => Van Nuys Airport

b) "100" => Traffic similar to 100% of the runway traffic ; "50" => Traffic similar to 50% of runw
"50" => Traffic similar to 50% of runway traffic, etc.

See Table below for actual aircraft mix and forecast annual number of operations for each category

Abbreviations:	
S	Single
D	Dual
DT	Dual Tandem
DDT	Double Dual Tandem
TT	Triple Tandem
ST	Single Tandem
COM	Combination

SUPPLEMENTAL INFORMATION

LAX TRAFFIC

LAX - DETAILED TRAFFIC BREAKDOWN

Aircraft	Wt/Gear	Annual Operations - Southside				Annual Operations - Northside			
		SS 100	SS 50	SS 25	SS 10	NS 100	NS 50	NS 25	NS 10
B737	190D	14,796	7,398	3,699	1,480	76,665	38,333	19,166	7,667
A320	173D	12,470	6,235	3,117	1,247	29,762	14,881	7,441	2,976
A321	210D	1,219	609	305	122	3,027	1,514	757	303
MD-80	161D	4,654	2,327	1,164	465	6,629	3,315	1,657	663
B767	451DT	21,314	10,657	5,329	2,131	7,508	3,754	1,877	751
B757	271DT	23,735	11,867	5,934	2,373	6,947	3,473	1,737	695
A340	840COM	289	144	72	29	3,468	1,734	867	347
MD-11	633COM	5,595	2,797	1,399	559	532	266	133	53
B777	777TT	7,970	3,985	1,992	797	9,376	4,688	2,344	938
B747	978DDT	7,746	3,873	1,937	775	15,492	7,746	3,873	1,549
CRJ	81D	13,184	6,592	3,296	1,318	40,251	20,126	10,063	4,025
EMB-120	27D	7,096	3,548	1,774	710	7,096	3,548	1,774	710
A330	517DT	747	374	187	75	514	257	128	51
A380	1305A380	13	7	3	1	653	327	163	65
	TOTALS:	120,827	60,414	30,207	12,083	207,921	103,961	51,980	20,792

SUPPLEMENTAL INFORMATION

ONT TRAFFIC

ONT - DETAILED TRAFFIC BREAKDOWN

Aircraft	Wt/Gear	Annual Operations - Ontario			
		ONT 100	ONT 50	ONT 25	ONT 10
A310	364D	42	21	10	4
A319	168D	3,585	1,793	896	359
A320	173D	6,092	3,046	1,523	609
A321	200	998	499	250	100
A330	380DT	1,266	633	317	127
A380	A380	74	37	18	7
B727	170D	42	21	11	4
B727-200	210D	98	49	25	10
B737-300	140D	4,876	2,438	1,219	488
737-700	155D	31,085	15,543	7,771	3,109
B737-800	175D	5,096	2,548	1,274	510
B737-900	188D	1,681	841	420	168
B747-200	836DDT	13	7	3	1
B747-400	913DDT	355	178	89	36
B747-8F	978DDT	414	207	104	41
B757-200	256DT	3,892	1,946	973	389
B757-800	271DT	11	6	3	1
B767-300	413DT	3,216	1,608	804	322
B777F	769TT	996	498	249	100
Globemaster 3	580COM	1	1	1	1
DC8	358DT	1	1	1	1
DC9	122D	2	1	1	1
DC10	443DT	396	198	99	40
MD11	633COM	2,432	1,216	608	243
MD80	161D	1,233	617	308	123
MD90	169D	1	1	1	1
P3C Orion	143D	58	29	15	6
B737-200	111D	4,157	2,079	1,039	416
BD700 Gl. Expr.	95D	581	291	145	58
CRJ-700	75D	3,893	1,947	973	389
F-15 Eagle	68S	11	6	3	1
ERJ-145	50D	443	222	111	44
Falcon 50	40D	667	334	167	67
BAe HS 125	30D	1,677	839	419	168
G150	26D	98	49	25	10
Learjet 40	20D	1,533	767	383	153
Super King	12.5S	3,137	1,569	784	314
Dornier Alpha Jet	7.5S	881	441	220	88
	TOTALS:	2,801	1,401	700	280

SUPPLEMENTAL INFORMATION

VNY TRAFFIC

VNY - DETAILED TRAFFIC BREAKDOWN

Aircraft	Wt/Gear	Annual Operations - Van Nuys			
		VNY 100	VNY 50	VNY 25	VNY 10
Boeing 727-200	210D	123	62	31	12
Boeing Business Jet (BBJ)	171D	748	374	187	75
Global Express (BD700)	95D	6,986	3,493	1,747	699
Gulfstream V	89D	11,096	5,548	2,774	1,110
Gulfstream IV	72D	14,383	7,192	3,596	1,438
Gulfstream GIII	69D	2,055	1,027	514	205
Gulfstream GII	65D	2,055	1,027	514	205
Dassault Falcon 900	46D	2,055	1,027	514	205
CL-600 Challenger	42D	4,931	2,466	1,233	493
Challenger 300 (BD100)	38D	3,082	1,541	771	308
Cessna Citation X (750)	36D	14,383	7,192	3,596	1,438
Cessna Soverign CE (680)	30D	2,466	1,233	616	247
HS125-800	25D	15,205	7,603	3,801	1,521
Cessna Citation 550	15D	20,547	10,274	5,137	2,055
Raytheon 390 (Premier)	12.5S	2,877	1,438	719	288
Gates Learjet 60	10D	20,547	10,274	5,137	2,055
Eclipse EA500	10D	2,466	1,233	616	247
C130	155TS	24	12	6	2
urbo Prop 30K	30A	6,321	3,160	1,580	632
Piston 35K	35S	3,160	1,580	790	316
Piston 7K	7S	30,024	15,012	7,506	3,002
Piston 5K	5S	124,836	62,418	31,209	12,484
Turbo Prop 12.5K	12.5S	25,283	12,642	6,321	2,528
McDonnell-Douglas EA-3B	82S	273	137	68	27
	TOTALS:	290,370	145,185	72,593	29,037

SOIL CBR

1) Undertake project-level geotechnical investigation to determine nature of subgrade soils.
2) Provide soil borings and subgrade CBR testing at frequency recommended by FAA Advisory
3) Design CBR = average minus one standard deviation - round down to nearest whole value.

STANDARD PAVEMENT SECTIONS - LOS ANGELES WORLD AIRPORTS

LAX PAVEMENT REQUIREMENTS - RIGID

AREA	TRAFFIC	SUBGRADE CBR		SURFACE REQMTS		BASE REQMTS		BASE/SB REQMTS		SB/SG REQMTS	NOTES
LAX NORTHSIDE	NS 10	CBR ≤ 3	→	20'' P-501	+	12'' P-304	+	12" P-154 on Geogrid[1]	or	18" P-153 Lime Stab[2] SG	→ 1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 4 (E=6,000 psi)
		CBR 4 - 6	→	20'' P-501	+	12'' P-304					
		CBR 7 - 9	→	19'' P-501	+	12'' P-304					
		CBR 10 - 13	→	18'' P-501	+	12'' P-304					
		CBR 14 - 18	→	17'' P-501	+	12'' P-304					
		CBR ≥ 19	→	16'' P-501	+	12'' P-304					
	NS 25	CBR ≤ 5	→	21'' P-501	+	12'' P-304	+	12" P-154 on Geogrid[1]	or	18" P-153 Lime Stab[2] SG	→ 1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 4 (E=6,000 psi)
		CBR 6 - 8	→	20'' P-501	+	12'' P-304					
		CBR 9 - 12	→	19'' P-501	+	12'' P-304					
		CBR 13 - 16	→	18'' P-501	+	12'' P-304					
		CBR 17 - 24	→	17'' P-501	+	12'' P-304					
		CBR ≥ 25	→	16'' P-501	+	12'' P-304					
	NS 50	CBR ≤ 3	→	21'' P-501	+	12'' P-304	+	12" P-154 on Geogrid[1]	or	18" P-153 Lime Stab[2] SG	→ 1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 4 (E=6,000 psi)
		CBR 4 - 7	→	21'' P-501	+	12'' P-304					
		CBR 8 - 10	→	20'' P-501	+	12'' P-304					
		CBR 11 - 14	→	19'' P-501	+	12'' P-304					
		CBR 15 - 20	→	18'' P-501	+	12'' P-304					
		CBR ≥ 21	→	17'' P-501	+	12'' P-304					
	NS 100	CBR ≤ 5	→	22'' P-501	+	12'' P-304	+	12" P-154 on Geogrid[1]	or	18" P-153 Lime Stab[2] SG	→ 1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 4 (E=6,000 psi)
		CBR 6 - 9	→	21'' P-501	+	12'' P-304					
		CBR 10 - 12	→	20'' P-501	+	12'' P-304					
		CBR 13 - 17	→	19'' P-501	+	12'' P-304					
		CBR 18 - 24	→	18'' P-501	+	12'' P-304					
		CBR ≥ 25	→	17'' P-501	+	12'' P-304					

NOTE: See Supplemental Information Page

STANDARD PAVEMENT SECTIONS - LOS ANGELES WORLD AIRPORTS

LAX PAVEMENT REQUIREMENTS - RIGID

AREA	TRAFFIC	SUBGRADE CBR		SURFACE REQMTS		BASE REQMTS		BASE/SB REQMTS		SB/SG REQMTS		NOTES
LAX SOUTHSIDE	SS 10	CBR ≤ 5	→	20'' P-501	+	12'' P-304	+	12" P-154 on Geogrid[1]	or	18" P-153 Lime Stab[2] SG	→	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 4 (E=6,000 psi)
		CBR 6 - 8	→	19'' P-501	+	12'' P-304						
		CBR 9 - 12	→	18'' P-501	+	12'' P-304						
		CBR 13 - 15	→	17'' P-501	+	12'' P-304						
		CBR 16 - 21	→	16'' P-501	+	12'' P-304						
		CBR ≥ 22	→	15'' P-501	+	12'' P-304						
	SS 25	CBR ≤ 4	→	21'' P-501	+	12'' P-304	+	12" P-154 on Geogrid[1]	or	18" P-153 Lime Stab[2] SG	→	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 4 (E=6,000 psi)
		CBR 5 - 8	→	20'' P-501	+	12'' P-304						
		CBR 9 - 11	→	19'' P-501	+	12'' P-304						
		CBR 12 - 14	→	18'' P-501	+	12'' P-304						
		CBR 15 - 20	→	17'' P-501	+	12'' P-304						
		CBR ≥ 21	→	16'' P-501	+	12'' P-304						
	SS 50	CBR ≤ 3	→	22'' P-501	+	12'' P-304	+	12" P-154 on Geogrid[1]	or	18" P-153 Lime Stab[2] SG	→	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 4 (E=6,000 psi)
		CBR 4 - 6	→	21'' P-501	+	12'' P-304						
		CBR 7 - 9	→	20'' P-501	+	12'' P-304						
		CBR 10 - 15	→	19'' P-501	+	12'' P-304						
		CBR 16 - 17	→	18'' P-501	+	12'' P-304						
		CBR ≥ 18	→	17'' P-501	+	12'' P-304						
	SS 100	CBR ≤ 4	→	22'' P-501	+	12'' P-304	+	12" P-154 on Geogrid[1]	or	18" P-153 Lime Stab[2] SG	→	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 4 (E=6,000 psi)
		CBR 5 - 9	→	21'' P-501	+	12'' P-304						
		CBR 10 - 11	→	20'' P-501	+	12'' P-304						
		CBR 12 - 15	→	19'' P-501	+	12'' P-304						
		CBR 16 - 21	→	18'' P-501	+	12'' P-304						
		CBR ≥ 22	→	17'' P-501	+	12'' P-304						

NOTE: See Supplemental Information Page

STANDARD PAVEMENT SECTIONS LOS ANGELES WORLD AIRPORTS

LAX PAVEMENT REQUIREMENTS - FLEXIBLE

AREA	TRAFFIC	SUBGRADE CBR	SURFACE REQMTS	BASE REQMTS	BASE/SB REQMTS		SB/SG REQMTS	NOTES
LAX NORTHSIDE	NS 10	CBR ≤ 4	5" P-401	12" P-304	54" P-154 on Geogrid[1]	or	36" P-154 on 18" P-153 Lime Stab[2] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 6 (E=9,000 psi)
		CBR 5 - 7	5" P-401	12" P-304	48" P-154	or	36" P-154 on 18" P-153 Lime Stab[2] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 6 (E=9,000 psi)
		CBR 8 - 10	5" P-401	12" P-304	24" P-154			
		CBR 11 - 15	5" P-401	6" P-304	24" P-154			
		CBR ≥ 16	5" P-401	6" P-304	12" P-154			
	NS 25	CBR ≤ 4	5" P-401	12" P-304	60" P-154 on Geogrid[1]	or	36" P-154 on 18" P-153 Lime Stab[3] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 3) Lime: % as needed to reach CBR 7 (E=10,500 psi)
		CBR 5 - 7	5" P-401	12" P-304	48" P-154	or	36" P-154 on 18" P-153 Lime Stab[3] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 3) Lime: % as needed to reach CBR 7 (E=10,500 psi)
		CBR 8 - 11	5" P-401	12" P-304	24" P-154			
		CBR 12 -16	5" P-401	6" P-304	24" P-154			
		CBR ≥ 17	5" P-401	6" P-304	12" P-154			
	NS 50	CBR ≤ 5	5" P-401	12" P-304	66" P-154 on Geogrid[1]	or	36" P-154 on 18" P-153 Lime Stab[3] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 3) Lime: % as needed to reach CBR 7 (E=10,500 psi)
		CBR 6 - 9	5" P-401	12" P-304	48" P-154	or	36" P-154 on 18" P-153 Lime Stab[3] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 3) Lime: % as needed to reach CBR 7 (E=10,500 psi)
		CBR 10 - 12	5" P-401	12" P-304	18" P-154			
		CBR 13 - 18	5" P-401	6" P-304	24" P-154			
		CBR ≥ 19	5" P-401	6" P-304	12" P-154			
	NS 100	CBR ≤ 5	5" P-401	12" P-304	66" P-154 on Geogrid[1]	or	36" P-154 on 18" P-153 Lime Stab[4] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 4) Lime: % as needed to reach CBR 8 (E=12,000 psi)
		CBR 6 - 9	5" P-401	12" P-304	48" P-154	or	36" P-154 on 18" P-153 Lime Stab[4] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 4) Lime: % as needed to reach CBR 8 (E=12,000 psi)
		CBR 10 - 13	5" P-401	12" P-304	18" P-154			
		CBR 14 - 19	5" P-401	6" P-304	18" P-154			
		CBR ≥ 20	5" P-401	6" P-304	12" P-154			

NOTE: See Supplemental Information Page

STANDARD PAVEMENT SECTIONS LOS ANGELES WORLD AIRPORTS

LAX PAVEMENT REQUIREMENTS - FLEXIBLE

AREA	TRAFFIC	SUBGRADE CBR	SURFACE REQMTS	BASE REQMTS	BASE/SB REQMTS		SB/SG REQMTS	NOTES
LAX SOUTHSIDE	SS 10	CBR ≤ 5	5" P-401	12" P-304	54" P-154 on Geogrid[1]	or	36" P-154 on 18" P-153 Lime Stab[2] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 6 (E=9,000 psi)
		CBR 6 - 7	5" P-401	12" P-304	36" P-154			
		CBR 8 - 10	5" P-401	12" P-304	18" P-154			
		CBR 11 - 14	5" P-401	6" P-304	24" P-154			
		CBR ≥ 15	5" P-401	6" P-304	12" P-154			
	SS 25	CBR ≤ 5	5" P-401	12" P-304	60" P-154 on Geogrid[1]	or	36" P-154 on 18" P-153 Lime Stab[3] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 3) Lime: % as needed to reach CBR 7 (E=10,500 psi)
		CBR 6 - 8	5" P-401	12" P-304	42" P-154	or	36" P-154 on 18" P-153 Lime Stab[3] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 3) Lime: % as needed to reach CBR 7 (E=10,500 psi)
		CBR 9 - 11	5" P-401	12" P-304	18" P-154			
		CBR 12 - 15	5" P-401	6" P-304	24" P-154			
		CBR > 16	5" P-401	6" P-304	12" P-154			
	SS 50	CBR ≤ 5	5" P-401	12" P-304	60" P-154 on Geogrid[1]	or	36" P-154 on 18" P-153 Lime Stab[3] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 3) Lime: % as needed to reach CBR 7 (E=10,500 psi)
		CBR 6 - 8	5" P-401	12" P-304	48" P-154	or	36" P-154 on 18" P-153 Lime Stab[3] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 3) Lime: % as needed to reach CBR 7 (E=10,500 psi)
		CBR 9 - 12	5" P-401	12" P-304	24" P-154			
		CBR 13 - 16	5" P-401	6" P-304	18" P-154			
		CBR > 17	5" P-401	6" P-304	12" P-154			
	SS 100	CBR ≤ 5	5" P-401	12" P-304	66" P-154 on Geogrid[1]	or	36" P-154 on 18" P-153 Lime Stab[4] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 4) Lime: % as needed to reach CBR 8 (E=12,000 psi)
		CBR 6 - 8	5" P-401	12" P-304	48" P-154 on Geogrid[1]	or	36" P-154 on 18" P-153 Lime Stab[4] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 4) Lime: % as needed to reach CBR 8 (E=12,000 psi)
		CBR 9 - 13	5" P-401	12" P-304	24" P-154			
		CBR 14 - 18	5" P-401	6" P-304	18" P-154			
		CBR > 19	5" P-401	6" P-304	12" P-154			

NOTE: See Supplemental Information Page

STANDARD PAVEMENT SECTIONS LOS ANGELES WORLD AIRPORTS

LAX PAVEMENT REQUIREMENTS - SHOULDER

AREA	SUBGRADE CBR		SURFACE REQMTS		BASE REQMTS		BASE/SB REQMTS		SB/SG REQMTS		NOTES
LAX SHOULDER	CBR ≤ 5	→	3'' P-401	+	6'' P-209	+	24" P-154 on Geogrid[1]	or	14" P-154 on 18" P-153 Lime Stab[2] SG	→	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 6 (E=9,000 psi)
	CBR 6 - 7	→	3'' P-401	+	6'' P-209	+	16'' P-154				
	CBR 8 - 9	→	3'' P-401	+	6'' P-209	+	12'' P-154				
	CBR 10 - 11	→	3'' P-401	+	6'' P-209	+	10'' P-154				
	CBR 12 - 14	→	3'' P-401	+	6'' P-209	+	8'' P-154				
	CBR 15 -18	→	3'' P-401	+	6'' P-209	+	6'' P-154				
	CBR ≥ 19	→	3'' P-401	+	6'' P-209	+	4'' P-154				

STANDARD PAVEMENT SECTIONS - LOS ANGELES WORLD AIRPORTS

ONT PAVEMENT REQUIREMENTS - RIGID

AREA	TRAFFIC	SUBGRADE CBR		SURFACE REQMTS		BASE REQMTS		BASE/SB REQMTS	SB/SG REQMTS	NOTES
ONTARIO RIGID	ONT 10	CBR ≤ 5	→	17'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 6 - 8	→	16'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 9 - 13	→	15'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 14 - 20	→	14'' P-501	+	12'' P-304	+	12'' P-154		
		CBR ≥ 21	→	13'' P-501	+	12'' P-304	+	12'' P-154		
	ONT 25	CBR ≤ 5	→	18'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 6 - 8	→	17'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 9 - 11	→	16'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 12 - 18	→	15'' P-501	+	12'' P-304	+	12'' P-154		
		CBR ≥ 19	→	14'' P-501	+	12'' P-304	+	12'' P-154		
	ONT 50	CBR ≤ 3	→	19'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 4 - 6	→	18'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 7 - 9	→	17'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 10 - 14	→	16'' P-501	+	12'' P-304	+	12'' P-154		
		CBR ≥ 15	→	15'' P-501	+	12'' P-304	+	12'' P-154		
	ONT 100	CBR ≤ 5	→	19'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 6 - 8	→	18'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 9 - 12	→	17'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 13 - 18	→	16'' P-501	+	12'' P-304	+	12'' P-154		
		CBR ≥ 19	→	15'' P-501	+	12'' P-304	+	12'' P-154		

NOTE: See Supplemental Information Page

STANDARD PAVEMENT SECTIONS LOS ANGELES WORLD AIRPORTS

ONT PAVEMENT REQUIREMENTS - FLEXIBLE

AREA	TRAFFIC	SUBGRADE CBR	SURFACE REQMTS	BASE REQMTS	BASE/SB REQMTS		SB/SG REQMTS	NOTES
ONTARIO FLEXIBLE	ONT 10	CBR ≤ 5	5" P-401	12" P-304	36" P-154 on Geogrid[1]	or	36" P-154 on 18" P-153 Lime Stab[2] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 5 (E=7,500 psi)
		CBR 6 - 8	5" P-401	12" P-304	24" P-154			
		CBR 9 - 11	5" P-401	6" P-304	24" P-154			
		CBR 12 -21	5" P-401	6" P-304	12" P-154			
		CBR ≥ 22	5" P-401	4" P-304	12" P-154			
	ONT 25	CBR ≤ 5	5" P-401	12" P-304	42" P-154 on Geogrid[1]	or	42" P-154 on 18" P-153 Lime Stab[2] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 5 (E=7,500 psi)
		CBR 6 - 9	5" P-401	12" P-304	30" P-154			
		CBR 10 - 12	5" P-401	6" P-304	18" P-154			
		CBR 13 -25	5" P-401	6" P-304	12" P-154			
		CBR ≥ 26	5" P-401	4" P-304	12" P-154			
	ONT 50	CBR ≤ 5	5" P-401	12" P-304	42" P-154 on Geogrid[1]	or	42" P-154 on 18" P-153 Lime Stab[2] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 5 (E=7,500 psi)
		CBR 6 - 9	5" P-401	12" P-304	36" P-154			
		CBR 10 - 14	5" P-401	6" P-304	24" P-154			
		CBR 15 - 20	5" P-401	6" P-304	12" P-154			
		CBR ≥ 21	5" P-401	4" P-304	12" P-154			
	ONT 100	CBR ≤ 6	5" P-401	12" P-304	36" P-154 on Geogrid[1]	or	36" P-154 on 18" P-153 Lime Stab[3] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 3) Lime: % as needed to reach CBR 6 (E=9,000 psi)
		CBR 7 - 10	5" P-401	12" P-304	30" P-154			
		CBR 11 - 14	5" P-401	6" P-304	24" P-154			
		CBR 15 - 25	5" P-401	6" P-304	12" P-154			
		CBR ≥ 26	5" P-401	4" P-304	12" P-154			

NOTE: See Supplemental Information Page

STANDARD PAVEMENT SECTIONS LOS ANGELES WORLD AIRPORTS

ONT PAVEMENT REQUIREMENTS - SHOULDER

AREA	SUBGRADE CBR		SURFACE REQMTS		BASE REQMTS		BASE/SB REQMTS		SB/SG REQMTS		NOTES
ONT SHOULDER	CBR ≤ 5	→	3'' P-401	+	6'' P-209	+	20" P-154 on Geogrid[1]	or	15" P-154 on 18" P-153 Lime Stab[2] SG	→	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 5 (E=7,500 psi)
	CBR 6 - 7	→	3'' P-401	+	6'' P-209	+	15'' P-154				
	CBR 8 - 9	→	3'' P-401	+	6'' P-209	+	11'' P-154				
	CBR 10 - 11	→	3'' P-401	+	6'' P-209	+	9'' P-154				
	CBR 12 - 14	→	3'' P-401	+	6'' P-209	+	7'' P-154				
	CBR 15 -16	→	3'' P-401	+	6'' P-209	+	5'' P-154				
	CBR ≥ 17	→	3'' P-401	+	6'' P-209	+	4'' P-154				

STANDARD PAVEMENT SECTIONS - LOS ANGELES WORLD AIRPORTS

VNY PAVEMENT REQUIREMENTS - RIGID

AREA	TRAFFIC	SUBGRADE CBR		SURFACE REQMTS		BASE REQMTS		BASE/SB REQMTS	SB/SG REQMTS	NOTES
VAN NUYS RIGID	VNY 10	CBR ≤ 5	→	14'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 6 - 9	→	13'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 10 - 13	→	12'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 14 - 20	→	11'' P-501	+	12'' P-304	+	12'' P-154		
		CBR ≥ 21	→	10'' P-501	+	12'' P-304	+	12'' P-154		
	VNY 25	CBR ≤ 5	→	15'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 6 - 9	→	14'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 10 - 13	→	13'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 14 - 21	→	12'' P-501	+	12'' P-304	+	12'' P-154		
		CBR ≥ 22	→	11'' P-501	+	12'' P-304	+	12'' P-154		
	VNY 50	CBR ≤ 3	→	16'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 4 - 7	→	15'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 8 - 12	→	14'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 13 - 18	→	13'' P-501	+	12'' P-304	+	12'' P-154		
		CBR ≥ 19	→	12'' P-501	+	12'' P-304	+	12'' P-154		
	VNY 100	CBR ≤ 5	→	16'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 6 - 10	→	15'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 11 - 15	→	14'' P-501	+	12'' P-304	+	12'' P-154		
		CBR 16 - 26	→	13'' P-501	+	12'' P-304	+	12'' P-154		
		CBR ≥ 27	→	12'' P-501	+	12'' P-304	+	12'' P-154		

NOTE: See Supplemental Information Page

STANDARD PAVEMENT SECTIONS LOS ANGELES WORLD AIRPORTS

VNY PAVEMENT REQUIREMENTS - FLEXIBLE

AREA	TRAFFIC	SUBGRADE CBR	SURFACE REQMTS	BASE REQMTS	BASE/SB REQMTS		SB/SG REQMTS	NOTES
VAN NUYS FLEXIBLE	VNY 10	CBR ≤ 4	5" P-401	6" P-304	24" P-154 on Geogrid[1]	or	24" P-154 on 18" P-153 Lime Stab[2] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 4 (E=6,000 psi)
		CBR 5 - 8	5" P-401	6" P-304	18" P-154			
		CBR 9 - 12	5" P-401	4" P-304	12" P-154			
		CBR ≥ 13	5" P-401	4" P-304	6" P-154			
	VNY 25	CBR ≤ 4	5" P-401	6" P-304	30" P-154 on Geogrid[1]	or	30" P-154 on 18" P-153 Lime Stab[2] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 4 (E=6,000 psi)
		CBR 5 - 7	5" P-401	6" P-304	24" P-154			
		CBR 8 - 10	5" P-401	6" P-304	12" P-154			
		CBR 11 -14	5" P-401	4" P-304	12" P-154			
		CBR ≥ 15	5" P-401	4" P-304	6" P-154			
	VNY 50	CBR ≤ 4	5" P-401	6" P-304	30" P-154 on Geogrid[1]	or	30" P-154 on 18" P-153 Lime Stab[2] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 4 (E=6,000 psi)
		CBR 5 - 8	5" P-401	6" P-304	24" P-154			
		CBR 9 - 12	5" P-401	6" P-304	12" P-154			
		CBR 13 - 15	5" P-401	4" P-304	12" P-154			
		CBR ≥ 16	5" P-401	4" P-304	6" P-154			
	VNY 100	CBR ≤ 5	5" P-401	6" P-304	30" P-154 on Geogrid[1]	or	30" P-154 on 18" P-153 Lime Stab[3] SG	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 3) Lime: % as needed to reach CBR 5 (E=7,500 psi)
		CBR 6 - 8	5" P-401	6" P-304	24" P-154			
		CBR 9 - 13	5" P-401	6" P-304	12" P-154			
		CBR 14 - 18	5" P-401	4" P-304	12" P-154			
		CBR ≥ 19	5" P-401	4" P-304	6" P-154			

VNY PAVEMENT REQUIREMENTS - SHOULDER

AREA	SUBGRADE CBR		SURFACE REQMTS		BASE REQMTS		BASE/SB REQMTS		SB/SG REQMTS		NOTES
VNY SHOULDER	CBR ≤ 5	→	3'' P-401	+	8'' P-209	+	14" P-154 on Geogrid[1]	or	14" P-154 on 18" P-153 Lime Stab[2] SG	→	1) Geogrid: Tensar BX 1200 Geogrid or equivalent 2) Lime: % as needed to reach CBR 5 (E=7,500 psi)
	CBR 6	→	3'' P-401	+	8'' P-209	+	12'' P-154				
	CBR 7	→	3'' P-401	+	8'' P-209	+	10'' P-154				
	CBR 8	→	3'' P-401	+	8'' P-209	+	8'' P-154				
	CBR ≥ 9	→	3'' P-401	+	8'' P-209	+	6'' P-154				